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Manufacturers Record

Exponent of America



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JANUARY 7, 1926

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The Influence of Good Highways for Upbuilding Life.

Many years ago, even long before the automobile came into existence, the Manufacturers Record constantly urged the building of good highways as essential to the material, educational and spiritual development of the country districts of the nation.

It was pointed out that the loneliness of farm life, especially to the women and children, was an overpowering burden, even then driving many farmers and many young people away from the country into the congested cities that they might have some of the benefits to be found where a larger population provided increased comforts and conveniences not possessed by the country people. It was said then, and often repeated, that it was incumbent upon the cities of the country to take the lead in working for good highways for reasons of humanity as well as for their own prosperity created by the larger prosperity of the farmers in the surrounding territory.

With the coming of the automobile, these reasons increased a thousand-fold. The blessings which the automobile has brought a thousand times outweigh the evil results from its use in highway robberies, in the escape of criminals and in some other phases of life. Indeed, every great modern improvement, like the telegraph, the telephone or radio, can be used, and often is used, for disreputable purposes, and probably to an extent exceeding the evil use to which the automobile is sometimes put.

With the invention of the internal-combustion engine a revolution in all business was inaugurated. Today, even in heathen lands, or lands which we have been accustomed to call heathen, the minister of the Gospel largely carries on his work through the use of the automobile despite some of the intolerable road conditions that have to be faced.

The automobile is the greatest factor that ever existed for bringing about improved highways as one of the great advance steps for human betterment. The two together mean better living conditions, the elimination of much of the loneliness of country life of the past, and the possibility of doubling and quadrupling the productive working power of men in the cities and in the country alike.

Wherever good highways are constructed, prosperity and progress follow as surely as day follows night. Wherever intolerably bad roads exist, whether consisting of bottomless mud holes or equally bottomless sand piles, there stagnation takes place, along with gradual deterioration of the moral and educational condition of the people, and there poverty exists in direct contrast with the prosperity to be found where modern highways are built.

We are giving in a special section in this issue many facts and figures in regard to what is being done in the building of highways, counting these as one of the most potent influences that the mind of man can bring forth for the betterment of life, the increase of man's working capacity, the advance of education, the increase of material prosperity and the betterment of the things which make for greater comforts and conveniences throughout the country.

We repeat what we have so often said before: The improved highway is the road that leads upward to larger and better life, to the sunlit hills of human progress, while the bad road, wherever it exists, leads downward to poverty of mind and body and in material affairs.

He who does the most for the building of improved highways with a vision of what they mean will do the most for the advancement of the comforts, the advantages, the progress—material, educational and spiritual—of the country through which they are built.

Then on with highway work as of individual, state and national importance!

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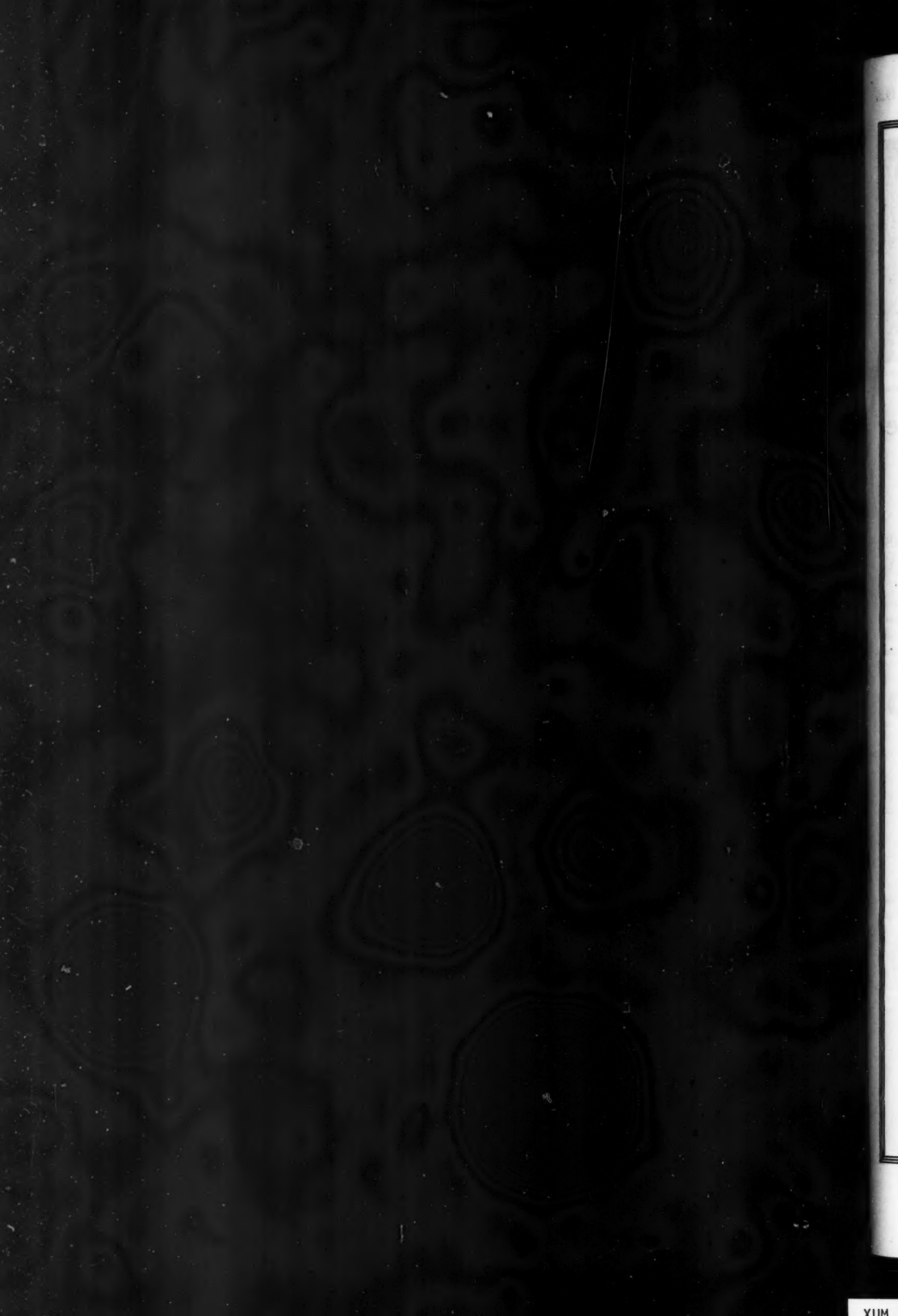
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JANUARY 7, 1926

Manufacturers Record

EXPONENT OF AMERICA

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Manufacturers Record

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of the South and Southwest as the Nation's Greatest Material Asset

Trade-Name Registered in the U. S. Patent Office

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Weekly

BALTIMORE, JANUARY 7, 1926.

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To Safeguard Rural Health. #7

"DOCTORS are scarce in the rural sections of the South and are becoming scarcer each year.

"* * * as the older country doctors die, or retire from practice, younger men do not come to take their places. Thus most country communities have come to be left without adequate medical service—many of them with no medical service whatever." So says John M. Miller, Jr., president of the First National Bank of Richmond, Va., in an address at the annual convention of the American Cotton Manufacturers Association.

Mr. Miller then discusses methods of coping with a difficult situation, and because of their villages places a large part of the responsibility on cotton-mill owners.

All of these troubles, he says, can be alleviated by public health nurses working in conjunction with such doctors as are available, and he suggests that in those communities where no physicians are available public health centers be established, to which physicians gladly come from nearest towns and cities. Speaking to and for cotton-mill men, he says it is "the part of wisdom for the cotton manufacturer to combine with state and county health authorities and the progressive country people to remedy these conditions."

In some of the Southern states, notably the Carolinas, Georgia, and to a lesser degree Tennessee (omitting Alabama for a reason that will soon appear), the cotton-mill men are sufficiently numerous and powerful to bring about almost any wholesome reform on which they set their hearts. Before they set about adopting Mr. Miller's excellent suggestions they and their states should make careful and exhaustive studies of the Health Department of the state of Alabama. Among the health departments of our forty-eight states it is unique.

The Alabama Health Department cannot easily or quickly be duplicated in other states, nor can it be duplicated at all without the vigorous co-operation of the physicians. It is the gradual growth of a system founded in the closing years of the Nineteenth Century by a physician born in Tennessee, reared in Mississippi and living in Mobile, Ala. Jerome Cochran, who rose to the top rank among the physicians of Alabama, and performed immense and heroic labors in disease prevention at a time when the profession had not begun to think along those lines, had the mind of a constructive statesman, and he created the nucleus of a public health system founded on the county as a unit. Jerome Cochran is dead, but the physicians of Alabama have carried his ideas out to triumphant fruition.

The first great achievement of the department has been its complete withdrawal from the sphere and the influence of politicians. Not even the Governor of the state can appoint, or effectively urge the appointment of, any member of the

department, from its head to its clerks. All of that is wholly in the hands of the department, and that is composed of a group of physicians elected from the membership of the state's medical profession, not by the people of the state but by their fellow-physicians. It is therefore an oligarchy, and a powerful one. The absolute power of the department in its field has come slowly, through legislation, as it made good in the eyes of the people so thoroughly as to defy all the bitter attacks politicians inevitably make upon so thoroughly non-political an organization in state machinery.

For the purposes of this discussion the interesting features of the system are:

First, a division of the state into six districts, with a state laboratory in each, for the analysis of all sorts of specimens, in diagnosis, and for such other purposes as a medical laboratory may be used for. These laboratories are so located, and the district boundaries so drawn, with respect to highway and rail communication, that each laboratory is as nearly as possible in the exact center, in terms of hours of travel, of its district.

Second, all laboratories, being under state supervision and maintained by state funds, are on the same level of excellence, and that is a higher plane than could be attained by individual counties.

Third, in every county of the state is a county board of health, and in about half the counties health units have already been organized; the other counties are being organized. In the unorganized counties the State Board of Health functions through the county board of health, acting in those counties as a local organization.

The county health unit consists of the county health officer and his staff—an assistant, who stays in the office, makes the office contact with the public, keeps vital statistics, handles correspondence, notifies parents of defects in their children and the treatments suggested as a result of school inspections, and a visiting nurse, who performs all the functions suggested by Mr. Miller in his address.

The county health officer is chosen from the roster of physicians of the county medical society, if one is available, but all the physicians of the state are eligible. He is elected, not by the people in a popular election but by his fellow-members of the county medical society. Thus, he is the representative of a county oligarchy that is a duplicate of the state oligarchy of which it is a part.

The county health unit carries on a constant educational campaign through correspondence, better babies contest exhibits, literature, posters, lectures, demonstrations. It is responsible for much administrative work, examination of school children, typhoid and smallpox inoculation, diagnostic work and quarantine enforcement.

A state health department administered solely from a central office would be too far from the people. The Depart-

ment strives to get as close to the people as possible through these county units, and each county is expected to do its stipulated share in organizing and maintaining its own unit. The organization of the state department, being founded as it is on all the physicians of the state, is such as to elevate to its leadership the best talent it affords. Through the supervision and standardization of county departments, the constant state-wide discussion and interchange of ideas and experience, every county is given the benefit of the best in scientific health control that the state has to offer.

Manifestly such a system is far in advance of the suggestions made by Mr. Miller to meet the urgent needs he so aptly points out. It is a machine that works harmoniously throughout the state, covering completely without costly duplication anywhere. It is an immense advance over a system calling for innumerable little independent units, each depending entirely on local initiative and local administration, and none receiving the full benefit of the experience of all the others. It may not provide the solution for all the problems Mr. Miller had in mind, but at least it will go far toward that end, and certainly we cannot do better in this connection than to urge the cotton-mill industry as a whole, with its great interest in rural health, to make an exhaustive study of the health department of the state of Alabama.

A DOCUMENT OF HUMAN UNDERSTANDING.

IN the MANUFACTURERS RECORD this week is an advertisement of the American Rolling Mill Company, Middletown, Ohio, of a character which seems to us rather remarkable. It is certainly out of the ordinary. In the form of what is technically known as a double-page spread, the story begins thus:

"Centuries ago a man of vision and courage defied the accepted belief of the time and started out to reach the east by sailing west. Fool! they called him—"

From Columbus on down through the years each age has had its leaders, its original thinkers and doers. And until the age of industry the contact between leader and follower was fairly close. With the industrial era came new problems in social intercourse, new obstacles in the path of human understanding.

Some 25 years ago, the story tells us, a few men with limited means and modest plans, but with large vision, took the first steps toward the establishment of an iron and steel plant at Middletown. Very definitely they believed in one thing—perfect understanding between management and men. Time crystallized this belief and tested it, and 20 years after the birth of the organization a written declaration was formulated as the company policy. It was called a document of human understanding. The phrase is not figurative, for, as the statement has it, "this declaration was the striking of hands in an organization of 8000 men and women."

"From the beginning a quarter of a century ago not one day of labor has been lost on account of misunderstanding."

A remarkable statement of a truly remarkable relationship.

J. P. MORGAN & CO. NOT TO ESTABLISH OFFICE IN WEST PALM BEACH.

IN reply to an inquiry made of J. P. Morgan & Co., bankers, New York, concerning the reported establishment of a branch office at West Palm Beach, Fla., the MANUFACTURERS RECORD is in receipt of the following letter from Martin Egan of that firm, New York:

"Your letter of December 22 to Messrs. J. P. Morgan & Co. has been referred to me and, for them, permit me to thank you for your interest. They will be grateful if you will publish a brief statement, on their authority, to the effect that the reports in question are unfounded."

CORN PRODUCTION AND VALUE.

THE acute financial situation of the corn growers of some portions of the West, and especially of Iowa, make timely some statistics on the production and average farm prices of corn for some years back as given in the following:

CORN PRODUCTION IN UNITED STATES AND WORLD SINCE 1914.

	Production (Bushels)	Average Farm Price Dec. 1	Farm Value Dec. 1	World Production (Bushels)
1914....	2,672,804,000	64.4	\$1,722,070,000	3,778,000,000
1915....	2,994,793,000	57.5	1,722,680,000	4,232,000,000
1916....	2,566,927,000	88.9	2,280,729,000	3,309,000,000
1917....	3,065,233,000	127.9	3,920,228,000	3,540,000,000
1918....	2,502,665,000	136.5	3,416,240,000	3,129,000,000
1919....	2,811,302,000	134.5	3,780,597,000	3,649,000,000
1920....	3,208,584,000	67.0	2,150,332,000	4,314,000,000
1921....	3,068,569,000	42.3	1,297,213,000	4,016,000,000
1922....	2,906,020,000	65.8	1,910,775,000	3,970,000,000
1923....	3,053,557,000	72.6	2,217,229,000	4,319,000,000
1924....	2,312,745,000	98.2	2,271,116,000	3,685,000,000
1925....	2,900,581,000	67.4	1,954,993,000	*3,500,000,000

*Estimate for 11 countries only, compared with 2,877,000,000 bushels for same 11 countries in 1924.

CORN EXPORTS AND IMPORTS, FISCAL YEARS ENDED JUNE 30.

	Exports (Bushels)	Imports (Bushels)
1915.....	50,668,303	9,897,939
1916.....	39,896,928	5,208,497
1917.....	66,753,294	2,267,299
1918.....	49,073,263	3,196,420
1919.....	23,018,822	3,311,211
1920.....	16,728,746	10,229,249
1921.....	70,905,781	5,743,384
1922.....	179,490,000	124,591
1923.....	96,596,000	138,000
1924.....	23,135,000	228,000
1925.....	9,791,000	4,617,000

The corn crop of 1924 was over 740,000,000 bushels less than that of 1923, and was smaller than during any one of the preceding years since 1901. We entered this year, therefore, with an extremely low stock of old corn on hand, and the December estimate of 2,900,000,000 bushels is over 100,000,000 bushels short of the 5-year average production of 1919-1923.

On November 1 the old corn left over from the 1924 crop was 60,952,000 bushels, while last year the stock on hand November 1 was 102,000,000 bushels.

The past year's crop, with one exception, was less than for several preceding years, with low prices prevailing, and the corn growers have been greatly depressed financially.

The truth of the matter is that the farmers of the whole country have not yet recovered from the deflation campaign of 1920 and 1921, which in the latter year carried an average farm price of corn on December 1 of that year to 42.3 cents per bushel. This year's prices on December 1 average considerably less than the price on December 1, 1924, the price of that year being largely based on the extremely small yield. This year's average price is higher than since 1920, and there must be some other reason except the law of supply and demand which has brought about the extreme depression which Western farmers are laboring under.

Possibly a solution of the problem would be found in some method or plan of organization which will enable an orderly marketing of the corn crop that will prevent the large surplus being dumped on the market immediately following the time of harvest. Such a plan, if carried out, would benefit many other surplus farm crops, such as cotton. In the last decade there has been made progress in the production of agricultural products to a far greater extent than efficient methods of disposing if such products have been developed.

The December report of the Department of Agriculture gives Iowa a production of 478,590,000 bushels, or the largest in the history of the state, and Illinois an estimated production of 388,080,000 bushels, and reports on the quality of this year's corn are somewhat above the average. The average farm price of corn in Iowa December 1 was 56 cents per bushel and in Illinois 58 cents per bushel.

THE VIRGINIA PIG IRON SITUATION.

IS the iron industry in Virginia to be destroyed? Is the state in which the first iron ore was melted in North America, and which for over 300 years has been an active producer of iron, to be no longer a factor in the market? Are resources of the state to be no longer developed, and possibly 2500 men, long employed in the iron industry, no longer to find employment in their chosen work? Are investments of over \$25,000,000 in furnace properties to become practically worthless?

For many years prior to the war Virginia furnaces produced approximately 6 per cent of the total foundry iron production of the United States. These furnaces now produce less than 1 per cent of the total. The records of one of the largest individual producers of iron in Virginia shows that the sales of pig iron made in 1924 were 93 per cent less than the sales made in 1915, and of the sales so made over 70 per cent was sold for delivery at destinations less than 50 miles from the furnaces.

It is true that wages, materials and other items entering into the cost of pig iron have increased. This increase has not been confined to any one producing district, and Virginia costs have risen with the costs of other districts. The costs of production in all districts have increased and so has the selling price of iron.

Why, then, does Virginia find operation almost impossible in 1925 while among the leaders of the industry in 1915?

All items of cost entering into the manufacture of pig iron have increased in all producing districts on a more or less uniform basis except one. The one item which shows a marked variance in the different producing localities is transportation cost. This one item of cost, above all others, retards and strangles the Virginia pig iron industry. Unlike any other iron-producing district in the United States, Virginia has almost no home market. Over 80 per cent of its normal production is shipped to out-of-state points, all of which comes into active competition with other iron-producing districts.

The Virginia furnaces are Southern furnaces. This fact has always been recognized by the trade, and also, prior to the war, by the carriers. The failure of the carriers to continue this recognition during the war and subsequent thereto is the prime reason for existing conditions. The application of increases to Virginia rates not applied to other Southern furnaces is the real cause of their inflated transportation costs.

Since 1914 there have been four blanket increases in freight rates in the country, of which only one applied equally to all localities. Southern furnaces have had two increases—a 25 per cent increase in 1918 and a 25 per cent increase in 1920. Northern furnaces have had 5 per cent, 15 per cent, 25 per cent and 40 per cent increases in their transportation costs. Virginia furnaces, though recognized as Southern furnaces, have been increased in line with the Northern furnaces. In every case where increased rates were ordered by the Interstate Commerce Commission, the one reason given for the increase was the need of the carriers for additional revenue. As the increases granted varied with the different sections of the country, it was considered necessary by the Commission that some fixed and arbitrary boundary line be named, and in each case the line on which the majority of the Virginia furnaces are located was fixed as the boundary.

The Virginia furnaces have long enjoyed location on the lines of two of the most prosperous railroads in the United States. Under Federal control, the Virginia lines were found by the Railroad Administration to deserve separate consideration from either Southern or Northern carriers, and they established the lines on which these furnaces are located as

a separate regional group, known as the Pocahontas group. With the enactment of the Transportation Act and subsequent hearing by the Interstate Commerce Commission, the Pocahontas region, while showing financial conditions better than either the Southern or Eastern groups, was included by the Commission in the Eastern group. This not only had the effect of requiring the more prosperous Pocahontas region to receive freight rate increases out of proportion to the needs of the carriers in that region, but also had the effect of permitting carriers in the remainder of the Eastern group to receive lower rates than the real needs of the other Eastern group carriers would justify. While the increases granted by the Commission to the Eastern group, including the Pocahontas region, were established to give the group as a whole the proper return on the property devoted to the transportation service, the net result was to cause the Virginia furnaces to pay more and the Northern furnaces to pay less than the requirement of the line on which they were located demanded.

It must be remembered that the grouping of the Pocahontas region with the Eastern group was entirely at the request of the carriers to the Commission, and was not brought about by the necessity of the Pocahontas region lines for the increases accorded them. This is clearly shown by a report of the Bureau of Railway Economics, a railroad statistical organization maintained by the carriers, showing the results of the carriers' operations for the year 1924, returns shown being based on the property investment account of the carriers. The report, in part, is as follows:

Region.	Rate Earned Per Cent.
New England region.....	3.74
Great Lakes region.....	4.84
Central Eastern region.....	4.26
Pocahontas region.....	6.03
Total—Eastern district.....	4.58
Total—Southern district.....	5.20

It will be noted that the Pocahontas region earned a higher rate of return than any district in the Eastern region and higher than earned by the Southern region as a whole. It also will be noted that the Northern furnace competitors of Virginia are located in the Central-Eastern region. The net result of the action of the carriers in applying Northern increases to Southern rates has been so to increase the cost of production and delivery as to drive Virginia iron from markets which for many years consumed over 80 per cent of its product.

While the disadvantage has been more marked in the East, due to the preponderance of the tonnage which formerly moved to that section, the disadvantage to the West is equally great. To illustrate: Prior to the war and to the era of horizontal rate increases Virginia iron reached all points in Ohio, Indiana and Michigan, and all points in Illinois other than a small territory about St. Louis, Mo., on a competitive basis with Southern furnaces; at present the advantage is limited to a small portion of southern and eastern Ohio, and this advantage is limited to a few cents only. All of Indiana, Illinois and Michigan is now lost to the Virginia producers.

The Virginia producer does not feel that it was the intent of Congress or of the Federal Commission to destroy, by rate adjustment, the advantages accruing to any given territory or industry by right of its location, nor does he feel that the right of the carriers for specific returns by groups, arbitrarily fixed, is more sacred than the rights of private industry. Should a long-established industry be destroyed in order that rates in an arbitrarily selected section of the country may yield a theoretical return on an estimated value? Why should the Virginia furnaces, through the inclusion of the Pocahontas region in the Eastern group, be required to pay excessive transportation charges and have their cost of production and delivery increased to the extent where their business has been destroyed in order that their competitors in the North

may receive the benefit of rates lower than the needs of the carriers serving them would apparently justify?

In recent years, especially since the abnormally high rates, due to the 1920 increases, there has been a considerable tonnage of foreign pig iron imported into the United States. This iron is, of course, sold in competition with other foundry irons produced in the United States in its various localities. An examination of the tonnages of iron produced in the United States over a number of years would indicate that the foundry tonnage produced in the country is approximately 15 per cent of the total tonnage of all the pig iron produced in the country. An examination of the tonnages produced in the various districts and the tonnages of foundry iron made would indicate that there is no relative change in the production of foundry grades as produced in any of the districts other than Virginia. It would appear that the principal tonnage which is superseded by foreign irons is that of Virginia iron, or at least, with the importation of foreign irons, other producing districts are, by means of more favorable transportation costs, able to hold their own in the competition for business, while Virginia, due to her abnormal handicap of transportation costs, is unable to compete against the field. A higher tariff on pig iron, especially foundry pig iron, would, of course, be of assistance in the struggle for existence; but the real and lasting relief for the Virginia producer must come through a readjustment of transportation costs.

The Virginia producer feels that one of two things must be done: Either the Pocahontas region must be restored as a territory for rate-making purposes, and rates adjusted in line with the needs of the carrier in that group, or else their rates should be restored to a relationship with Southern furnaces in the application of general increases and reductions. Above all, the carriers should return to the cardinal basis for constructing rates, long employed prior to the war—the basis of making rates no more than the traffic will bear; of making rates in line with the value of the service to the shipper.

An equitable rate-making transportation policy on the part of the carriers should restore Virginia to its proper place as an iron-producing district, but a continuation of the present basis of freight transportation charges leaves little hope for the survival of the Virginia iron industry.

ANOTHER GREAT INVESTMENT IN THE SOUTH.

AS emphasizing again the tremendous industrial and business expansion of the South, it is announced that the Southern Bell Telephone & Telegraph Co., with main offices in Atlanta, will expend this year a total of \$33,300,000 in the nine Southern states in which it operates. These include Alabama, Florida, Georgia, North Carolina, South Carolina, Kentucky, Louisiana, Mississippi and Tennessee; expenditures will cover the cost of additions to exchanges and offices, extension of lines and the replacement of facilities.

Florida will witness the greatest expansion of telephone facilities that it has ever known in one year. It is planned to expend more than \$9,500,000 in that state alone, while the amount will be approximately \$6,500,000 in Louisiana, more than \$4,400,000 in Alabama and sums in excess of \$1,000,000 in each of the other states.

An investment by one company of more than \$33,000,000 in one year is a great contribution toward Southern development. It means that the company not only sees the need of such a vast expenditure, in order to meet the growing demands of a rapidly expanding industrial and business development, but that it recognizes the soundness of this development and is willing to invest its capital because of the reasonable certainty of satisfactory returns to its stockholders.

TWO JUSTIFIED CRITICISMS OF SECRETARY KELLOGG.

OSWALD CHEW of the Commercial Trust Building, Philadelphia, Pa., sends to the MANUFACTURERS RECORD copy of a letter written to Secretary of State Kellogg in vigorous criticism of Mr. Kellogg's charge that "the armies of France and Belgium were in the Ruhr, and the rule of force at that moment had displaced the rule of law." The rule of force was absolutely justified, and if Mr. Kellogg's intention was to indicate that it was without justification he has made a monumental blunder.

The letter from Mr. Chew to Secretary Kellogg, dealing with this particular question and with the cancellation of debts, follows:

"I have read with great interest the speech which you made at the dinner given in your honor on December 14 by the Council of Foreign Relations. Allow me, please, to take exception to that part of your speech in which you are reported as saying:

"The armies of France and Belgium were in the Ruhr and the rule of force at that moment had displaced the rule of law."

"Might I suggest that had you said, 'The armies of France and Belgium were in the Ruhr, as it had been found necessary to have recourse to peaceable military measures to enforce the rule of law,' this statement would have been more correct.

"Under the Treaty of Versailles, France and Belgium were justified, both legally and morally, in going into the Ruhr as they did. Had they not done so, it is unlikely that the Dawes plan would have gone into effect. I have heard that General Dawes himself stated about the occupation:

"If you had not come in (meaning the French and Belgian armies of occupation), we (meaning the Dawes Commissioners) would not now be here."

"Such persons as the late Representative John Jacob Rogers of Massachusetts, in his speech delivered in the House of Representatives Wednesday, May 21, 1924, entitled, 'What Else Could France Have Done?' and Senator David A. Reed of Pennsylvania, in a speech widely reported in the newspapers all over the country at that time, vigorously justified France and Belgium in their policy of peacefully entering the Ruhr with their armies.

"That, I might say, is now past history.

"There was a great outcry about it in Germany at the time, and many pro-Germans and pacifists in this country protested against the action of the French and Belgians, until such men as Rogers and Reed showed them that not only were the French and Belgians justified in law, but also by common sense, and the usage which in our own country gives a creditor the right to seize the property of a fraudulent debtor who shows every intention of making it impossible for his creditor to collect.

"This is why I protest against your saying—if you, in fact, did make the statement, and were not incorrectly reported in the press—that 'the rule of force at that moment had displaced the rule of law.'"

"This statement, allow me to add, conveys naturally the inference that 'the rule of force' was illegally invoked, or at least invoked without justification. Otherwise, you would naturally have used some other expression than 'displaced the rule of law.'"

"I respectfully submit that this is an unfair reflection upon our Allies in the World War, France and Belgium. It is particularly unfair because the statement is untrue.

"If you have been incorrectly quoted, please accept my profound and sincere apology.

"Please allow me to bring one more matter to your attention, namely, the fact that you defend the non-cancellation of any of our Allies' debts. I allude particularly to the debt which France owes to us.

"May I state that I believed we should cancel the debt which France owes to us in repayment for the supplies which we sent them during the year following our entry into the World War and before we were able to send men in substantial numbers to take up our share of the burden of the war. The supplies which we so sent during this period should be

regarded by us as a small set-off to the lives lost by our gallant Allies of France during this period of the war.

"I should like to add that France, at the time of our life-and-death struggle, not only gave us outright 11,000,000 livres, for which repayment was never demanded or offered (see page 23, 'France Courageous and Indomitable,' which I am sending you under separate cover), but also sent her own soldiers and ships, together with the food and clothing necessary for them, which ran into many more millions of livres, and never asked us one cent for these voluntary services.

"As the late Admiral Mahan has well said, if it had not been for the fleet of De Grasse, the victory at Yorktown would not have been possible, and it is more than doubtful if the Americans could have gained the ultimate victory.

"Since we owe our very existence as a nation to the generous and timely aid which France voluntarily offered and gave us, at a moment when it was on the verge of bankruptcy, surely, at this time, when we are able yearly to reduce our national debt by the billion, we should extend all possible aid."

Bearing also on the question of the French indebtedness to the United States, Stephen Bell, foreign editor of Commerce and Finance, New York, writes the MANUFACTURERS RECORD as follows:

"Secretary Kellogg of the State Department, stung by your presentation of the Allied debt question and the wide publicity it has attained, has essayed a defense of the Government's policy in his address before the Council on Foreign Relations in New York city. If possible, he has made a bad policy worse. Some excuse of ignorance of the economic principles involved in the transfer of such immense sums might have been offered prior to his address, but this is now impossible, for he has shown that the Government has an understanding of them, for he stated the reasons that have impelled the Government to 'call the attention of bankers to the fact that indiscriminate loans to municipalities and states were not favored by the German Government, because they might raise serious questions of transfer of funds sufficient to pay the principal and interest on such bonds.'

"This 'serious question of the transfer of funds' seems on a gigantic scale throughout the problem of the Allied debts. Dollars do not grow in Europe. They have but a small part of the world's monetary gold, for we already have half of it or more, while the total is less than the amount of the debts. There is, then, but one way in which our debtors can acquire the dollars to pay these debts—by the sale to us of their goods and services in prodigious amounts, a thing which we have devised a high protective tariff to prevent.

"Further proof that the Government understands this, while persisting in its almost criminal policy (which has already all but made France a bankrupt), may be seen in the description of it given by George E. Roberts, vice-president of the National City Bank, in the latest bulletin of that bank. By means of loans by private American capitalists these Government debts are to be transformed into commercial debts, our Government being paid practically out of the proceeds of such loans.

"Will not this course eventually leave our lenders of capital holding the bag of debt which the Government itself cannot collect?"

A SUGGESTION TO BUSINESS MEN.

E. J. SWEM, librarian of the College of William and Mary, Williamsburg, Va., referring to a gift of some copies of "Slanders Against Prohibitionists Refuted," writes:

"I find that the opinions of business men on the liquor question have much more weight with men in college than exhortations of ministers or professors. In fact, I think much good could be accomplished if business men who are good speakers and prohibitionists would speak occasionally on the subject to college students."

Here is a suggestion worthy of acceptance by many business men in all parts of the country. College students are often deprived of the information which they should have on which to base their judgment as to the Prohibition question, on obedience to law and on many other problems which thoughtful business men could intelligently present to them.

We trust that the suggestion made by Mr. Swem will be adopted by many prohibition business men who are able to present the matter strongly.

GOVERNOR SMITH AND THE EFFORT TO CORRAL THE NEGROES FOR COMMUNISM.

JUST pardoned from penal servitude by Governor Smith of New York for anti-American activities, Benjamin Gitlow loses no time in resuming his communistic campaign and advocates "an international labor defense, comprising hundreds of thousands of members and a powerfully organized, disciplined Communist party, which will include the 11,000,000 negro inhabitants of the continent," as he said to a Communist gathering in New York city.

Gitlow is a 100 per cent alien. The 11,000,000 negroes whom he would incite to overthrow the Government by violence and bloodshed are very nearly 100 per cent Americans, at least in spirit, in loyalty to the nation and in American nationalism. Gitlow essays a huge job when he plans to proselyte the American negro, especially the negro of the South. It can't be done.

Governor Smith's patriotism and good judgment in pardoning Gitlow are demonstrated in the promptness with which this ex-convict returns to open attack on the United States Government. The South will be pleased by Gitlow's efforts to incite trouble among the negroes in that section.

AN OPTIMISTIC VIEW OF ENGLAND'S FUTURE.

C. W. BARRON, owner and editor of Barron's, takes decided issue with the pessimistic view recently expressed through Barron's by Dr. E. J. Dillon in regard to business conditions in England. Dr. Dillon's letter, as published in the MANUFACTURERS RECORD a few weeks ago, drew a very doleful picture of England's future. We published it as a matter of interest, but questioned the accuracy of Dr. Dillon's diagnosis of the situation.

Mr. Barron's letter to his own paper does not refer to Dr. Dillon's article, but to the pessimistic views recently expressed by our former ambassador, George Harvey, and takes decided issue with Harvey's views. Mr. Barron thinks that England is having a rapid "come-back" and is in no danger whatever of being on the down-road, as strongly stated by Dr. Dillon and Mr. Harvey.

In discussing the rubber situation, he states that there has been an increase in the price of rubber companies' stock which represented \$1,000,000,000 capital to above \$2,000,000,000, and that the American tire manufacturers will pay the bill. He might have said the American automobile users will be the ones to pay the bill, for the tiremakers will pass the bill on to the consumers.

"America is now paying England," said Mr. Barron, "at the rate of more than \$500,000,000 a year for rubber in excess of 1924, and at the same time England will pay America \$200,000,000 a year less for cotton this season, by reason of the fall in the price, than she paid last year." According to Mr. Barron's rosy picture, England is winning out, and on a very heavy scale.

FLORIDA CALLED THE TURKEYS.

THE North mourned at the high price for Christmas turkey—"the great demand for Christmas turkey in Florida" helped largely to "curtail the New York supply" from Texas. The moral is obvious: "Go South" for all the good things in life. And Christmas turkeys as fine as were ever raised sold for less in Florida than in Baltimore.

Construction Begun on Texas Power Plant.

ERECTING 120,000-KILOWATT STATION ON COMAL RIVER, NEAR NEW BRAUNFELS—TO USE LIGNITE AS FUEL SUPPLY.

The Comal power plant, now under construction near New Braunfels, Texas, along the upper level of the Comal River, is designed as a base load plant of a maximum capacity of 120,000 kilowatts, to be operated by the Comal Power Co. and to supply current to San Antonio and adjacent towns through the San Antonio Public Service Co. and the South Texas Public Service Co., subsidiaries of the American Light & Traction Co.

The fuel supply available consists of fuel oil, natural gas and lignite from the Bastrop mines near by. Following extensive tests last winter, it was decided to burn lignite in pulverized form. Contract for the design and construction of the plant was awarded the U. G. I. Contracting Co., Philadelphia, in April, 1925.

The amount of water required by the modern superpower plant is enormous, and as a result is the determining factor in choosing a plant site. At New Braunfels is a supply of clear spring water for a plant of 90,000 kilowatts without recooling. The average minimum difference between the levels of the upper and lower Comal rivers is 21 feet, and by selecting the upper site it was possible to flow the water through the condensers by gravity, thus effecting quite a saving in initial outlay and operating cost through the elimination of circulating pumps.

The generating unit will be a Westinghouse steam-driven turbo-generator with direct connected exciter. There will

storage tank of 1500 gallons capacity, a transfer pump and two oil coolers.

A complete fire-fighting system as well as a complete compressed-air system will be provided.

Fuel in the raw state will be delivered by rail direct to the track hopper after passing over the track scales. It will be fed to the crusher and reduced to pass through a three-quarter-inch mesh screen. It will then be raised by skip-hoist to the top floor of the preparation house and distributed by means of belt conveyors to the raw-fuel bins, from which it will pass by gravity through the dryers to the pulverizing mills, where it will be ground until 75 per cent will pass through a 200-mesh screen.

The fuel fed to the dryers will contain about 30 per cent moisture, and the dryers, arranged in banks of four, using steam as a drying medium, will reduce the percentage of moisture to 18. The prepared fuel will be discharged directly into separators located above the roof of the boiler house, and the separators will discharge into a duplicate system of screw conveyors, which will distribute the prepared fuel to the pulverized-fuel bins. There will be one bin to each boiler, the storage being sufficient for a 24-hour run. The bins will be located in front of the boilers and at a height sufficient to permit the fuel to fall by gravity to the feeders, of which there will be two banks of six each to each boiler. At this point about 15 per cent of the air, at a temperature of about



SHOWING PROGRESS IN EXCAVATION AND ON FOUNDATIONS FOR NEW POWER PLANT.

be a closed feed-water heating system of four stages, with two low-pressure and two high-pressure heaters.

For each turbo-generator installed there will be two Babcock & Wilcox boilers, each containing 17,950 square feet of heating surface and a superheater placed interdeck. The side and rear walls of the furnace and the ash hopper will be protected by water screens, composed of four-inch tubes of the fin type, and these will be connected to form a part of the circulating system of the boiler, containing sufficient surface to raise the boiler rating to 2000 horsepower normal capacity.

There will be two variable-speed motor-driven and one steam turbine-driven six-stage centrifugal boiler-feed pumps. The steam-driven pump is for emergency purposes only and so connected that it will cut-in automatically. Each motor-driven pump will be controlled by a Ruggles-Klingman electrically operated differential pressure regulator. The house service system consists of two constant-speed motor-driven centrifugal pumps for regular service and one steam turbine-driven centrifugal pump for emergency purposes. A 30,000 gallon tank will be placed on the boiler-house roof.

The oiling system will consist of a centrifuge purifier, a

250 degrees F., required for combustion will be introduced to the feeders, through which the fuel and air will pass to the burners at the operating floor level. The rest of the air required for combustion will be fed to the boiler through the air preheater at approximately 350 degrees F.

The capacity of the fuel preparation plant will be 45 tons per hour per generating unit installed, thus reducing the grinding time to one eight-hour shift per day.

Among the firms who will furnish the major items of equipment and materials are the following:

Boilers, Air Preheaters, Superheaters and Auxiliaries—Boilers, the Babcock & Wilcox Co., New York; water screens, Combustion Engineering Corp., New York; superheaters, the Babcock & Wilcox Co.; forced and induced draft fans, B. F. Sturtevant Co., Boston; feed-water regulators, Copes Regulator Co., Pittsburgh; water columns, the Babcock & Wilcox Co.; plate air preheaters, Combustion Engineering Corp.

Furnaces—Furnace casing (sheet steel), U. G. I. Contracting Co., Philadelphia; suspended arches and hollow side walls, M. H. Detrick Co., Chicago; insulating brick, Celite Products Co., Chicago; raw coal handling equipment, Link Belt Co., Chicago; track scale, Howe Scale Co., New York.

Drying, pulverizing and combustion equipment—Dryers,

bled steam dryers, Combustion Engineering Corp.; combustion control, Smoot Engineering Co., New York.

Stack—Fabricator and erector, J. A. Rossiter Chimney Co., Inc., Houston, Tex.

Building Steelwork—Boiler feed pumps, De Laval Steam Turbine Co., East Trenton, N. J.; sump pumps, make-up pumps, the Goulds Manufacturing Co., Seneca Falls, N. Y.; feed-water heaters, Westinghouse Electric & Manufacturing Co.; evaporator, Wheeler Condensing & Engineering Co., Carteret, N. J.; main generating unit, Westinghouse Electric & Manufacturing Co.; oil filtering system, Centrifuge-Dravo Doyle Co., Pittsburgh; ventilating air cooler, Griscom-Russell Co., New York.

Condenser and Auxiliaries—Condensate pumps, air ejectors, Westinghouse Electric & Manufacturing Co.; water screens, Link-Belt Co.

Piping Valves and Covering—Non-return and globe valves, Schutte & Koerting Co., Philadelphia; gate valves, the Lunkensheimer Co., Cincinnati, Ohio; atmospheric relief valves, bleeder valves, bleeder heater traps, Atwood & Morrill Co., Salem, Mass., and Cochrane Corp.; boiler feed regulator, Copes Regulator Co.; boiler blow-off valves, Edwards Valve & Manufacturing Co., Chicago; high-pressure steam traps, Armstrong Machine Works, Three Rivers, Mich.; condensate pumps for low-pressure heater and dryer, Nash Engineering Co., South Norwalk, Conn.

Electrical Equipment—High-tension switch gear, the Electric Power & Equipment Corp., Philadelphia; low-tension switch gear, Electric Development & Machine Co.; bench board and relay board, Westinghouse Electric & Manufacturing Co.; station transformers, power transformers, General Electric Co.; outdoor and indoor circuit breakers, General Electric Co. and Westinghouse Electric & Manufacturing Co.; substation structure, R. D. Coombs & Co., New York; motors and control, Westinghouse Electric & Manufacturing Co.; outdoor current transformers, Niagara Improvement Corporation.

Miscellaneous Equipment—Traveling crane, turbine room, Northern Engineering Works, Detroit, Mich.; air compressor, Ingersoll-Rand Co., New York.

Bids on \$700,000 Nurses' Home.

Bids will be received until January 14 for the erection of the proposed \$700,000 Margaret Price Johnston memorial building, to be used as a nurses' home and children's ward for the Union Memorial Hospital in Baltimore. The structure will be six stories, of irregular dimensions, Colonial architecture, brick exterior, limestone trim, with concrete and wood floors on steel beams and slate roof. It will accommodate 182 nurses, 60 children in a ward on the sixth floor, and will contain an assembly room on the first floor to seat 350. A roof garden will also be provided. Joseph Evans Sperry of Baltimore is the architect, while Herman F. Doeleman and C. L. Reeder, also of Baltimore, are the structural and mechanical engineers, respectively.

The following contractors have been invited to estimate: Frainie Brothers & Hagley, Tase-Norris Co., Inc., Consolidated Engineering Co., M. A. Long Co., B. F. Bennett Building Co., Inc., Cogswell-Koether Co., Charles L. Stockhausen Co., Inc., J. L. Robinson Construction Co., Mason, Curley & Brady, North Eastern Construction Co., Gladfelter & Chambers and John Hiltz & Sons Co., all of Baltimore.

New Line Between Tampa and New Orleans.

Tampa, Fla.—A new passenger and freight line between Tampa and New Orleans will be established early in January by the Lykes Brothers Steamship Co. of this city. The first steamer to sail will be the E. G. Crosby, a twin-screw vessel having accommodations for more than 300 passengers and 400 tons of freight. Sailing time between Tampa and New Orleans will be 30 hours.

The D. L. Shackelford Motor Co., Miami, Fla., advises the MANUFACTURERS RECORD that it plans to purchase site and will probably erect a building of 250,000 to 300,000 square feet of floor space for its own purposes.

\$100,000 TO ADVERTISE VIRGINIA.

Local Organizations Also Raising Funds, Notably Norfolk and Portsmouth.

Richmond, Va., January 2—[Special.]—Virginia's proposed \$100,000 advertising fund got under way with a zest during December when the Virginia Real Estate Association and the Virginia Hotel Men's Bureau, operating under an agreement with the Virginia State Chamber of Commerce, launched drives for \$15,000 each as units in the campaign, and the chairmen report substantial subscriptions daily, according to R. F. Nelson, director of publicity of the state organization.

The Virginia Real Estate Association have placed their campaign in the hands of Major Coleman of Norfolk, who, with the assistance of the local real estate exchanges throughout Virginia, is making a personal visit to each of the cities to arouse interest in the movement. W. E. Hockett of the Hotel Richmond, in Richmond, has named a committee of nine, one from each section of the state, to raise the \$15,000 pledged by the hotel interests.

At the present time plans are being made by which the Virginia Bankers Association and other organizations will be asked to contribute units toward the fund, and favorable advices have been received from leading bankers throughout Virginia supporting the movement.

The entire campaign will be co-ordinated and space placed through the publicity department of the Virginia State Chamber of Commerce, which has prepared copy and is planning an active drive for all state development outside of Virginia as soon as possible.

As a result of the work of the Virginia State Chamber of Commerce throughout Virginia toward the raising of an advertising fund, several of the cities of the state are proposing and some have raised individual funds. The first community advertising fund raised in Virginia of any respectable proportions, however, was the \$100,000 subscribed for the advertising of the Norfolk-Portsmouth community, and which is now controlled by the Norfolk-Portsmouth Ad Board, of which Col. S. L. Slover is chairman.

Subscriptions to the Virginia advertising campaign are being taken on a three-year basis and subscribers are pledged to support the campaign until its conclusion.

Bids Invited on Municipal Building.

Lexington, Ky.—Proposals will be received until January 11 by the board of commissioners of this city for the erection of the proposed municipal building, bids to be addressed to Mayor Hogan Yancey. The structure will be three stories, 128 by 50 feet, with an annex 40 by 60 feet, for the police department, this to be connected to the main building by first and second floor corridors. It will be of Roman architecture, with cut stone and buff brick exterior, and cut stone trim, terrazzo and wood floors. Marble wainscoting and ornamental plaster will be used in corridors and cut stone for balustrades. The building will be equipped with a central heating plant in the basement and provided with elevator service. Frankel & Curtis of this city are the architects.

West Virginia Coal Deal Involves \$1,000,000.

Morgantown, W. Va., December 26—[Special.]—Holdings of the Whyel Coke Co. at Arnettville, W. Va., consisting of a coke plant and 2000 acres of Pittsburgh vein coal, have been sold to the Imperial Coal Corporation of New York for \$1,000,000. At present it is said the plant has a capacity of 1000 tons a day, which will be increased to 2500 tons.

Annual Reports of Savings Banks in Baltimore.

Annual reports of savings banks in Baltimore display notable evidences of thrift throughout the city, all of them showing impressive increases during the last twelvemonth.

The report of the Savings Bank of Baltimore, which, it may be noted, is its 108th annual statement, shows total assets of \$62,298,512 on December 31, 1925, as compared with \$59,217,320 one year ago. The assets consist mainly of railroad bonds, over \$21,000,000; mortgage loans, over \$14,000,000; United States Liberty and Treasury bonds, over \$10,000,000; public-utility bonds, also over \$10,000,000; cash over \$2,900,000, besides other items such as collateral loans, miscellaneous bonds, etc. The amount due depositors is \$56,854,393. The number of accounts open is 59,737, a net gain of 1236 during the year. The report is signed by Austin McLanahan, president, and Thomas Cradock, treasurer.

The report of the Eutaw Savings Bank shows total assets of \$42,940,383 on December 31, 1925, as compared with \$41,368,818 one year ago. The assets consist mainly of mortgage loans of over \$16,285,000; railroad bonds, \$9,242,000; United States Liberty bonds and notes, \$8,697,750; railroad equipment bonds, \$3,550,000; municipal bonds, \$2,419,250; cash, \$2,036,168, and other items such as bonds, ground rents, etc. The amount due depositors is \$38,532,908. The number of accounts open is 47,757, a net gain of 136 during the year. The report is signed by William M. Hayden, president, and F. P. Whitcraft, Jr., treasurer.

The report of the Provident Savings Bank of Baltimore shows total assets of \$13,523,281 on December 31, 1925, as compared with \$12,656,833 one year ago. The assets consist mainly of bonds, \$6,860,761, and mortgages, \$5,762,980, the remainder being collateral loans, real estate and cash, the latter amounting to over \$432,000. The amount due depositors a year ago was \$11,742,394; now it is \$12,506,036. The number of accounts is 78,215, an increase of 2831 during the year. This does not include Christmas Savings accounts, which total over 10,000. The report is signed by Elisha H. Perkins, president, and Charles C. Duke, treasurer.

The report of the Citizens Savings Bank shows total assets of \$7,626,513 on December 31, 1925, as compared with \$7,267,340 a year ago. The assets consist mainly of bonds and stocks, \$4,146,755; loans on mortgages, \$2,627,005; cash, \$405,045, and other items such as collateral loans and real estate, including ground rents. The amount due depositors is \$6,993,989. The number of accounts open is 11,477, a net increase of 1035 during the year. The report is signed by Edwin M. Spillman, president, and George H. Kuhst, treasurer.

Further particulars concerning all these reports will be found in the formal publications elsewhere in these pages.

Mechanical Work for Courthouse.

Miami, Fla.—Proposals will be received until January 13 by the Dade County Commissioners, at their office in this city, for mechanical work in the new courthouse and city hall building under construction here at a cost of approximately \$2,250,000. The proposed work will include plumbing, electrical work and elevators. The building will be of steel construction, 27 stories high, surmounted by a stepped pyramid approximately 50 feet high. As previously reported in the MANUFACTURERS RECORD, general contract has been awarded to L. W. Hancock of Miami, and Louisville, Ky. A. Ten Eyck Brown of Atlanta is the architect and August Geiger of Miami associate architect.

A Vigorous Call for Patriotic Service as Jurymen.

A. T. Stewart,
Attorney-at-Law.

Winchester, Tenn., December 16.

Editor Manufacturers Record:

On the cover sheet of the current issue of your splendid magazine, the MANUFACTURERS RECORD, appears editorial comment challenging the civic luncheon clubs throughout the country to vigorously endorse and support the "jury service" idea as considered by you in an excellent and well-thought-out article. I note that Kiwanis, stirred by this editorial, polled its members in one of its local clubs and found 73 out of 74 members to be consistent "shirkers" from jury duty. I am almost sure this is representative of the average body of business men that might gather on any occasion in America. It is deplorable, too. There can never be a better solution of our troubles than to put them in the hands of our leading men.

I commend you for your attention to this important matter, and I also wish to call your attention to the fact that International Civitan went on record at the 1924 international convention at Miami, in May of that year, as favoring, without reservation, the professional jurymen being entirely eliminated and urging that all Civitans respond to the call for jury service as a patriotic duty. Again, in Dayton, Ohio, at the International Civitan convention held in June of this year, this matter of jury service was referred to in a report read before the delegates assembled by the retiring international president, Stockton Broome, of Jacksonville, Fla., when he said:

"Let me urge that Civitan exert its influence to eliminate professional jurymen and enforce selection of the jury from the unexempt citizens of the country, thereby upholding the respect and dignity of our courts."

In addition to this, attention has been given to this important matter by various local clubs throughout the organization of Civitan. The Civitan Magazine, a monthly paper, has from time to time contained discussion on this subject.

My duties as a District Attorney General here in Tennessee, in addition to my usual work as a lawyer, keep before me all the time the idea of the importance of having good, responsible and intelligent men on the jury. The jury system, when properly used, is one of the greatest blessings in American jurisprudence, but when abused is a curse. People cannot respect the courts of the land when they know that corrupt, or perhaps only incompetent, men are selected on the juries, but they will respect them if the jury is selected in the usual manner and those so selected serve and offer no excuses. I hope you will continue this good work.

A. T. STEWART.

Bids on \$300,000 Building in Baltimore.

Plans and specifications have been distributed among bidders for the erection of the new building to be erected in Baltimore by the Order of the Eastern Star at a cost of approximately \$300,000. Contractors invited to estimate on the structure include the following: J. Henry Miller, Inc., Price Construction Co., M. A. Long Co., Consolidated Engineering Co., Mason, Curley & Brady, B. F. Bennett Building Co., Tase-Norris Co., Inc., John Hiltz & Sons Co. and the Cogswell-Koether Co., all of Baltimore. Bids will be received until January 12.

The building will be four stories and basement, 150 by 75 feet, of brick and limestone construction. It will provide space on the first floor for a number of stores, and on the upper floors for an auditorium, lodge and committee rooms. Clyde N. and Nelson Friz are the architects; C. L. Reeder, mechanical engineer, and H. F. Doeleman, structural engineer, all of Baltimore.

THE STORY OF THE
South's Good Roads



A Review of the Progress of 1925



The Automobile and Good Roads: Their Contribution to the Nation's Development.

A VERY prominent New York banker said to the MANUFACTURERS RECORD some years ago, "The trouble with this country is that it is going to destruction in automobiles." He deplored the extravagance of the American people, their thoughtless expenditures and wastefulness in spending money for what he regarded as a "toy" that was being bought for amusement.

One nationally known finance company has \$50,000,000 of its assets loaned on automobiles today, and the old-line bankers of the country, who make possible the expansion of the so-called "finance" business, are themselves directly financing dealers and purchasers of automobiles, to say nothing of the money they lend in the ordinary course of business to the manufacturers of automobiles. So highly is this regarded as a credit proposition that world-famous indemnity companies are issuing indemnity bonds guaranteeing the banker against loss when such loans are made with what is regarded as a proper margin of safety.

Unquestionably, the automobile and good roads, for which it is directly responsible, are the largest contributors to our national wealth.

The "toy" has required a smooth surface on which to run. The owner of the "toy" has demanded it; has been and is willing to be taxed for it, and good roads are regarded now as being as important a part of our national economic life as railroads. The American people are, about many things, very patient people, and yet they are the most energetic people in the world. In their development of this greatest of all lands they have decided on good roads—and good roads it will be.

Will it be another aid to destruction? That thought is arrant foolishness. The man who pictures this country from one border to the other, East or West, North or South, connected by smooth highways and calls it wastefulness is not only behind the times but has a twist in what Mr. Wilson used to call his "thought processes."

Good roads mean enlightenment. They mean prosperity and progress of every description. Go through the interior of the country where the farmer with his "flivver" has demanded a paved highway—what do you find? Homes and barns are painted and the paint manufacturer has sold more paint in that neighborhood than he ever sold there before. The lawns are well kept, the school houses are magnificent structures—as they ought to be to house the younger generation—the stores have fine new fronts, the people dress better, splendid new churches are erected, and the whole atmosphere of the country and the town has undergone a metamorphosis which is primarily and directly attributable to good roads. In every item of this there is a direct contribution to the wealth of the community and of the nation.

By means of good roads the manufacturer sells more goods, there is more demand for labor, and incidentally labor has a much wider market for its services than it ever had, because it can get to distant points in its "flivver," and in turn the employer has a much larger field from which to draw labor.

If in any great change the outlook of a community or a city is broadened, as in the case of good roads, there cannot help but be renewed energy and enterprise in every activity by the people of that state or community. The American people require an outlook. Their energetic nature demands it. It may be a very bold thing to say, but the thing which is making possible the change from 3,000,000 miles of mud to 750,000 miles (so far) of improved highway is the ability—and the fact defies contradiction—of the American people to think more clearly and see further ahead than any other

people on earth. That accounts for their ability to produce. It explains their inventiveness; it explains their method of standardization in manufacturing; it explains their unwillingness to be content with what *is* simply because it *has* existed for generations, and explains their demand that they have the best of everything contributing to their health and their happiness, and the health and happiness of their children. That is why they are going to have good roads.

Can anyone doubt that good roads and the automobile have done more to increase the land values of the city and the country than any other factor? They are spreading civilization into the dark places—civilization and Christianity—bringing health to the city dweller, who rightly uses every opportunity to put his family in his car and get out into the country, and making it possible for the man of the country to have city advantages and facilities within his reach.

We have between 17,000,000 and 18,000,000 automobiles now, and this is 85 per cent of what the world has. There will probably be more than half as many more in the next five years. In fact, 30,000,000 in 1931 has been predicted. This other 50 per cent will want good roads just as much as we want them; and while their presence on the highways will present another very pressing problem which requires solution, it will be seen at once that with the solving of this problem we make another important, direct contribution to our prosperity and well-being. If our streets are to be wider, if we are to have overhead structures or more subways and roads throughout the country of 30 feet in width instead of 15 feet, then labor has a long term of employment ahead, and paving-material people and machinery people, and the people who supply these people, have in store years of prosperity.

In the deflation of '20-'21 the outstanding factor that saved this country from worse trouble than it had was the Government's program of road building. It was announced that \$500,000,000 was available for the construction of highways under the Federal-aid plan, and the moral effect, as well as the actual effect on railroads and supply people permeated the entire economic structure.

It isn't any longer a matter of doubt. Good roads are here and good roads are going to stay here, and we are going to increase them until we have the privilege of going from one community to another in any state and any county over a smooth highway. It was proposed recently, and the statement was made that a bill was to be brought up in this Congress, that a sum of \$10,000,000,000 should be asked to connect up every town in the land of 5000 people or more with every other town by a good road. It could be paid for in the way that North Carolina's great system of roads is being kept up and paid for, by a gasoline tax, it would be splendid.

The building of good roads was given a great impetus by the war. They saved the situation in the movement of supplies, which in many cases would have been held up for days and weeks owing to the congested condition of the railroads. The hard-surfaced highways leading to our principal sea-ports enabled the thousands of trucks that were put into service to move promptly and on time for shipment abroad of supplies for our own men who were going to the front and for our Allies when in their greatest need, but the number and mileage of these good roads was by no means adequate to the needs of the hour.

The subject could be dwelt upon almost indefinitely. Practically every phase of our national life, our business engagements, the time calculated to do work of all sorts and of going from one point to another are all based upon our transportation in an automobile over a smooth street of

highway. It has become nearly as much a part of our existence as the telephone.

Is it worth while to draw a contrast between the mud of yesterday and the freedom of movement of today? Rather may it be supposed that the doubters, such as they are, question the ability of the community to pay for a good highway, instead of its very evident advantages. To these, surely, it may be said the advantages are not alone for today. If ever a bond issue is justified, it is in the case of a good road. And it is entirely feasible to pay the carrying charges and

set aside an adequate sinking fund for retirement purposes out of a tax levied on the users of the road. This is accomplished with no apparent effort, but with such a distinct gain to the whole community in wealth and health and happiness that the time is rapidly approaching when our road program will vastly exceed the work so far done.

As a result we shall know each other better. We shall know this great country of ours better. A country's civilization, it has been truly said, is measured by its transportation facilities.

Scientific Research in Road Building.

By CHARLES M. UPHAM, Director, Highway Research Board, National Research Council.

Industry has long recognized the value of scientific research; in fact, at the present time research is the backbone of industrial progress. It is worthy of note that those industries which have made the greatest advancement are the ones maintaining extensive research laboratories which are constantly delving into the fundamental laws underlying the manufacture and use of their products.

Though the art of road building is one of the oldest of human activities, very little advancement had been made in the science underlying the art until the introduction of the motor vehicle. Compelled by the use of this new means of transportation to provide roads that would withstand the terrific strain brought upon them, engineers began to conduct research into the fundamental science underlying highway building. With the great demands for highways throughout the country and the phenomenal growth of transportation throughout the country, these studies increased in number. The work in one state being wholly unrelated to that of another, there was considerable duplication of effort. In many cases important findings of research used in highway building in the state where it was discovered were unknown or unavailable for use in adjoining states. It must be realized that with our enormous highway expenditure of \$1,000,000,000 annually, the application of the results of research leading to but a small saving on the construction of each road in the aggregate amounts to a large sum of money.

In realization of the need for an agency which would prepare a comprehensive national program for highway research, which would assist existing organizations to co-ordinate their activities with this program, and which would collect and distribute information of completed and current research, there was organized in 1920 as part of the National Research Council, under its Division of Engineering and Industrial Research, the Highway Research Board. This Board is composed of representatives of those national organizations interested in the development of the highways of the country. Its membership includes representatives of technical organizations, of Federal and state departments, and higher educational institutions. The Highway Research Board functions through an executive committee and a director.

In addition, the Highway Research Board conducts special investigations, financed by industrial concerns. The Board furnishes unique auspices, under which such work may be carried on that is scientific in character and impartial in its findings. The Board is not of itself a research agency, but serves as a national clearing-house for all matters pertaining to highway research. In making research information available the Board always gives full credit to those agencies or individuals responsible for the particular research. At the present time the Board has under way four special investigations, each of which is financed by the industrial concerns most interested in the results of these studies. These investigations are of such wide scope that no individual organization would be justified in conducting it alone.

The first of these investigations to be undertaken by the Board was to determine the economic value of steel reinforcement in concrete roads. For the past 10 years it has been a moot question with highway engineers whether or not to use steel bars or mesh reinforcement within the concrete roads. Some engineers have strongly favored this method of construction, whereas the experience of others seemed to indicate that the concrete did not need this material, and that the use of steel was not justified by the additional expense incurred. The report on this investigation was delivered at the fifth annual meeting of the Highway Research Board, recently held in Washington. The results indicate the advantages and disadvantages of the use of steel in concrete road construction, and is backed by such conclusive evidence, based upon a nation-wide study, as to be acceptable to highway engineers, and will serve as a means of settling many doubtful points in that connection.

Another investigation now under way hopes to find an inexpensive road surface that will carry intermediate traffic and yet be low in first cost and maintenance. When we consider that 85 per cent of the rural highways of the country are in an unimproved condition, and that it would not be economical for many years to come to hard-surface these roads, we are faced with the problem of finding an inexpensive type of surface such as is contemplated by this investigation. Highway engineers are realizing this as one of the most important of their present-day problems, and are co-operating fully with the Highway Research Board in this important investigation.

Another one of the investigations under way is that on culvert pipe and small drainage structures. This has for its object the determination of the life and economic value of the drainage structures now in use, in order to guide highway engineers in the proper design of these important features.

An investigation of interest to city dwellers pertains to the urban highway finance problem. This study will attempt to determine the relation of the city dweller to rural highway finance, to investigate the problems of city street financing, including the widening of streets, and to study the financial aspects of city traffic control.

As may be readily realized, these problems are of vital importance to all highway engineers, and evidence of this fact was shown at the annual meeting of the Highway Research Board, held in Washington, D. C., December 3 and 4, 1925, when about 300 highway engineers, executives and research workers and representatives of industry were present, representing 28 states and 2 foreign countries, as well as 25 universities.

The Highway Research Board is being recognized by engineers as a clearing-house for all highway research matters, and it has already become one of the most important agencies, guiding the way to the proper development of our highway transportation system by pointing out the latest and best methods, based on scientific research, of financing, constructing, maintaining and operating the highways of the country.

The Rural Postal System and Good Roads Develop Character and Create Wealth.

FORTY thousand rural letter carriers daily distribute to tens of thousands of people letters, newspapers and magazines. In olden days, before the establishment of the rural system, these millions of farmers and their families lived a good many miles from the nearest postoffice. Some of them rode several miles every day to get their mail, losing much time which could have been employed on the farm. Many would go only once or twice a week to the nearest postoffice, and, therefore, were but slightly in touch with world affairs or with market conditions for their crops.

Under the rural delivery system a large proportion of the farmers of the country now get a daily paper within a few hours after it is printed. These papers and letters and magazines are delivered at their homes or to the little boxes at their gates. In olden days these millions of country people were denied the advantages of prompt mail delivery which city dwellers have, and even at the best they lost many millions of hours every day in going to and from the postoffice, and, what was even more important, they lost touch with the outside world.

Today through the rural free delivery service 40,000 men, traversing hundreds of thousands of miles of highways, bring the farmers in touch with the outside world, and thus enable them to keep thoroughly posted as to the movement of trade and commerce, world affairs generally, and the rise and fall of the prices of the things which they buy and sell.

It is a wonderful revolution which has taken place. It gives to the daily papers an opportunity for reaching the country invaluable to the country people. It stimulates the ambition and desires of these country families for broader knowledge of what is going on, and in their houses are now found magazines and weekly and daily papers to a greater extent than can be found among any other farming class in any other country of the world.

Wherever good highways exist this rural free delivery service can be carried on to full advantage. The good highway makes it possible for the rural mail carrier to travel with greater speed, to do his work more thoroughly, and improved highways would be worth their cost if they did but little else in opening these country districts to the rural carrier. In some places the country roads are so intolerably bad that the Government wisely cannot attempt rural service.

As "commerce follows the flag," so rural mail service follows the better highway.

If we studied the question of improved highways from no other angle than this, it would easily be seen that the cost of these highways and the full and free co-operation of the Federal Government in their construction would more than justify the expenditure.

Looking to the agricultural interests of the land—and that really means to the prosperity of the whole country, for upon farm prosperity depends the prosperity of all other interests—good highways should be built to such an extent that no fairly well settled section would be deprived of the benefit of regular rural free delivery.

This service is costly to the country. It has added many millions of dollars over and above the income therefrom to the maintenance of the Postoffice Department, but it is worth to the country many millions of dollars more than its cost. It is not always possible to restrict the cost of Governmental work intended for the welfare of a people to the direct

financial returns that can be shown on the books. Everything which ennobles a people, which broadens their information, which develops them mentally and spiritually is worth the money spent for the results achieved.

The Federal Government in undertaking to develop this rural system should be held directly responsible for the heartiest co-operation in financing the building of these highways as a part of the Government's justifiable work in this rural delivery service. Its value has been inestimable and every year increases its influence for good, but it cannot attain unto the full measure of its potentialities except as the Federal Government co-operates with state and county governments in the building of highways to spread like a net throughout the land. The advance thus created in education, in patriotism and in the broadening of the thought of the farmers and their families would be worth the cost even if these roads did not result in the tremendous advance of material prosperity wherever they are built. Looked at from either standpoint, they are worth more than they have cost, and worth more than they will cost in the future.

This is one way in which the nation should study highway building and its relation to the welfare of the land, but there are an infinite number of other ways in which highway building should be considered as one of the prime requisites for bringing about a nation-wide unity of sentiment and action and patriotism. As this country could not prosper with one-half free and one-half tied to slavery, so no country can reach its best advancement with more than one-half of its people enjoying the privileges of paved streets and other advantages of city life while the other part lives in sections of bottomless mud roads, or sand roads equally bottomless, both of which are destructive of material prosperity and tend to drag the people down into a lower moral and educational standard.

Wisely enough may the people of the country as a whole unitedly determine that wherever population justifies there shall be improved highways. No man can measure the value of highways in developing the people and bettering the conditions under which they live.

North Carolina and Florida are two outstanding illustrations of the tremendous prosperity which to a very large extent has come through building highways. Wherever one travels in North Carolina, through the towns which but a few years ago were backward, with unkempt streets, badly paved, with inadequate school facilities and hotels that would disgrace a Western mining town, there are now to be found, and largely as a result of highway work, superb schools, splendid homes, well-paved, clean streets, and an air of thrift and prosperity which almost staggers one who saw these conditions as they were eight or ten years ago and who now sees them as they are today.

Florida was one of the first states of the South to build good highways. These attracted motorists by the tens of thousands. They spread abroad the knowledge of Florida's attractions and the charm of its climate, where motoring is a delight through nearly every day of the winter season.

These highways were actively begun fifteen or sixteen years ago, somewhat in advance of those in most other states, but the traffic has so enormously increased that their width, with rare exceptions, is wholly inadequate for the tremendous congestion of automobiles, motorbuses and motortrucks. From one end of Florida to the other there is an ever-moving panorama of these vehicles of modern days. They come and go in an endless stream which no man can count. They are

a part of that wonderful progress of the state for which those who had the vision fifteen or twenty years ago in building highways are largely responsible.

There are many other states in the South and Southwest which could with equal profit spread their highways into every part of that territory and quicken into fuller life every influence for good upon the people thus reached. These highways are a blessing of untold value. No man can measure their influence for good and the effect they have upon the building of character and bringing into life latent power in hundreds of thousands of people.

Some months ago the story was briefly told in the MANUFACTURERS RECORD of what Montgomery county, Alabama, by reason of good highways, has done in becoming the foremost

county in the country in the maintenance of a system of schools which reach in their influence every boy and girl in the county—it matters not how far back in the woods they may live—and by which autobuses using these highways bring the children out of the dark places of the county into the light of educational work. What that county has done is a striking illustration of the immeasurable possibilities in the ennobling of the lives of thousands of children for better things, which every other county in this country should attempt to emulate.

Good highways, well maintained, are the greatest creators of wealth, material wealth, and educational and moral wealth likewise, in connection with motor traffic which the mind of man has yet devised.

Good Highways Are Nation Builders.

HERETOFORE inaccessible country districts, isolated and stagnated, are becoming centers of activity before the march of progress in the building of good roads. The debt the South and the country owes to the highway builder and associated interests, including the automobile, can hardly be measured in money value. Wherever such highways touch millions of dollars in increased property values result, to say nothing of the greater value obtained in the increased social benefits and freer transportation and trade facilities secured.

The last decade of progress in highway building in the South has been also one in which the South has made the greatest material advance. Hundreds of billions of dollars have been spent for material advancement and thousands of miles of modern highway have been constructed during this period. Great as has been the progress made, there is still a vast amount of similar work to be done before every section is adequately covered.

In some of the Southern states good highways now connect all the principal cities, and cross-state roads have been opened, meeting other cross-state systems of adjoining states. Only last month there was opened to travel a link south of Roanoke which was long missing in one of the principal through Southern routes, connecting with the North via the Shenandoah Valley of Virginia to Roanoke, Bristol and the South. Links for shorter distances are constantly being completed or improved which add to the already existing network of Southern good roads.

TOTAL ROAD MILEAGE AND MILEAGE OF SURFACED STATE AND COUNTY ROADS, BY STATES, DECEMBER 31, 1924.

Southern States,	Total Rural	Surfaced	Surfaced
	Mileage.	State Roads.	County Roads.
Alabama	61,501	1,652	10,858
Arkansas	74,865	2,864	2,974
Florida	28,413	2,055	6,944
Georgia	98,364	2,326	16,862
Kentucky	68,704	2,249	14,817
Louisiana	39,803	3,401	1,277
Maryland	14,886	2,247	2,110
Mississippi	56,880	2,374	6,867
Missouri	112,100	1,660	7,875
North Carolina	67,906	5,310	12,839
Oklahoma	134,262	1,368	300
South Carolina	64,408	3,000	5,991
Tennessee	64,726	2,480	9,853
Texas	167,085	7,227	11,822
Virginia	59,872	2,438	4,924
West Virginia	35,434	961	716
Total South.....	1,149,809	43,702	117,029
United States	3,002,916	128,347	339,558
South's percentage....	38.2	34.0	34.4

It is estimated that there are about 500,000 miles of surfaced roads in the United States, and that more than 31,000 miles of roads were surfaced in the United States in 1925. In addition to surfaced roads, a considerable mileage has been graded and drained according to engineering standards. There were 236,000 miles of such roads at the end of 1924, and in the neighborhood of 14,000 miles were constructed during 1925. Improved roads of all classes may probably reach the 750,000-mile mark, over a third of the total being

in the Southern states. Of the total rural road mileage of the country, amounting to over 3,002,000 miles, the South has 38 per cent, though it has about a third of the country's total area. The South has 34 per cent of all the country's surfaced roads. Great as this mileage is, the South has only about 14 per cent of its roads surfaced, indicating that there is still much additional work to be done.

The South is now spending on highway work of all kinds over \$320,000,000 annually, about one-third as much as the country's expenditures for similar highway development. Road building has been constantly increasing in the Southern states for the past decade, and the expenditure in 1925 of more than \$400,000,000 sets a new high mark. The magnitude of the highway development of the South may be realized when we compare the \$240,000,000 spent in the United States on road construction in 1914 with the more than \$320,000,000 now expended annually in the South for similar improvements.

In 1914 the South was spending on road work less than one-quarter of the country's total; by 1924 the South's proportion was about one-third of the country's expenditures. The result is found in the superb highways and in the improvement of main arteries for travel completed and under way. As yet much is to be done in connecting short stretches of through roads and in bettering the existing routes, but in contrasting conditions now with those of only a few years ago we can easily grasp the great progress made in road building in the South in recent years and what it has meant in the opening up of country districts to travel. Every day this section is benefiting from its investment; not only is it made easier for the people of the Southern communities and states to visit and trade one with the other, for the farmer can reach his local trading center quickly and easily, but as the through state systems have been made continuous automobile tourists from every state in the Union are enabled to see the South for themselves, and they are thus able to measure more correctly the real possibilities of the Southern states in material resources, in beauty of scenery and in a climate unsurpassed.

In these days of the automobile good highways are as truly builders of the nation as were the railroads which were under construction fifty years ago or the inland water routes which were developed in the earlier years of the country.

To Vote on \$225,000 of Bonds.

Flemingsburg, Ky.—It is understood that the Fleming County Commissioners plan to call an election on a bond issue of \$225,000 for the reconstruction of state roads in the county, including approximately 10 miles of the Maysville and Lexington road. The only unreconstructed portion is from the Mason county line to Lexington. Mason county is working on the road and expects to complete its part by next summer.

Expansion of Motorbus Industry in the South and Its Relation to Highway Development.

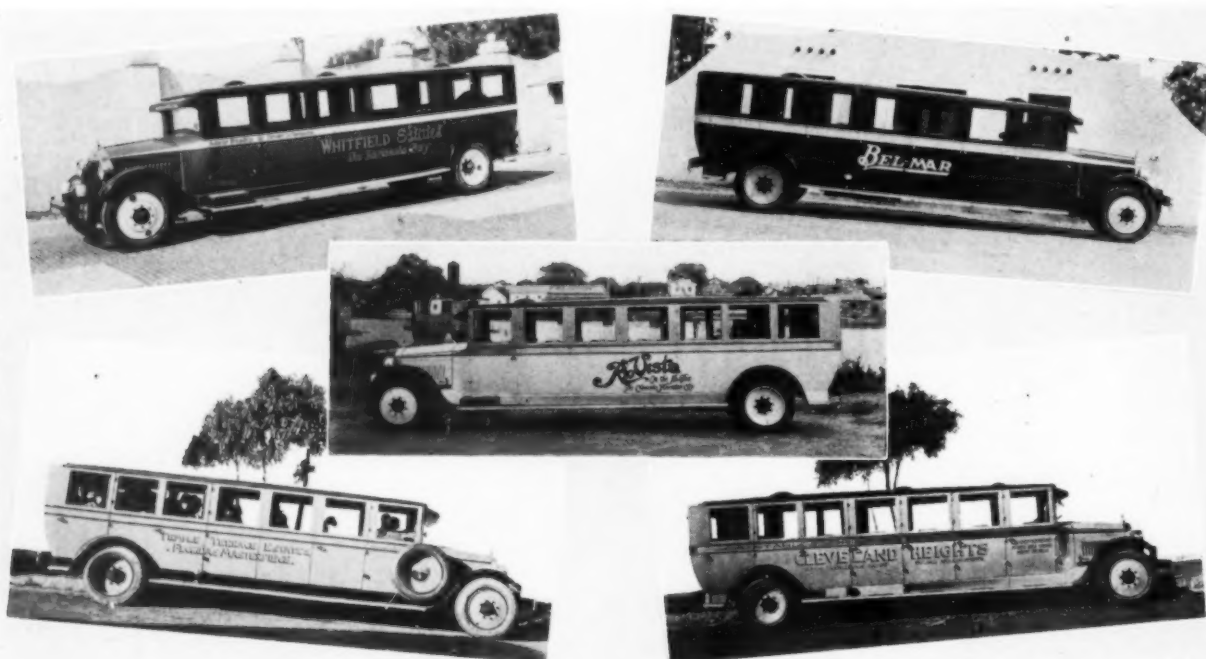
By CARROLL E. WILLIAMS.

With the expansion of the good roads program throughout the country, there has come the logical development of the motorbus industry. These two agencies better social conditions and increase property values, and with their coming whole sections take on new life.

An idea of the tremendous growth of the motorbus industry may be gained when it is considered that at the end of last year there were more than 70,000 buses in operation in the United States, and that 15,000 buses were manufactured. Consolidated schools using motorbuses total 11,838, while 251 street railways use 5000 buses and 20 steam railroads have 367 buses. In addition, railroads using gasoline rail motor coaches number 190, and railroads using motortrucks for shipping service total 51.

So throughout the South one finds very few villages inaccessible now to the motorbus, provided they are located on good roads. As a result the countryside has become almost modern. The dreariness and lonesomeness of the country is

the MANUFACTURERS RECORD announcements concerning the inauguration of public bus lines between large cities, as well as between the metropolitan centers and smaller communities. Already there is talk of a line to operate from Chicago to New Orleans and the Mississippi Gulf coast as a result of the big land development projects under way in the South in which Chicago capitalists are interested. Excursions have been running for some time from Washington, Memphis, Nashville and Atlanta to Florida. Regular service is now in operation between Baltimore, Washington, Harrisburg, Hagerstown, Frederick, Philadelphia, Atlantic City and New York. From New York buses run to Boston and other New England cities. The lines operating over short routes from big cities to suburbs and from one town to another have proved a decided success, and this service is steadily being expanded. Now the development of lines connecting big cities, great distances from each other, is well under way. Recently a Washington man engaged in a survey of bus



ILLUSTRATING THE HIGH TYPE BUSES USED VERY GENERALLY BY REAL ESTATE DEVELOPERS OF FLORIDA.

largely a thing of the past. Motor vehicles of all types have invaded the rural sections, and a great good has been done for the well being of great numbers of people.

Good roads and automobile transportation have everywhere broadened trade areas. In the case of numerous cities and towns they have made it possible and profitable for everyone within a radius of many miles to come to the larger places for trading, banking, recreation and amusements. Improved highways make possible the steady operation of bus lines throughout the year, and no longer are rural residents isolated from cities and communities. Now those living at a distance and desiring to "come to town" know that at a certain time safe and dependable transportation passes their home. These bus lines, threading the country as they now do, render an invaluable service, adding to the convenience of individuals and to the prosperity and advancement of whole communities.

Every week there are reported in the news columns of

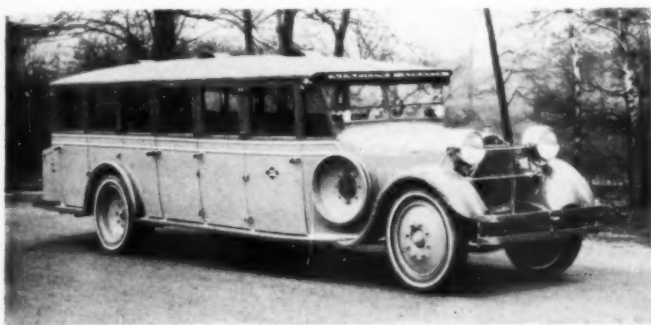
operations traveled practically the entire distance from Washington to Chicago by bus.

One bus on a "Circle Tour" recently left Chicago on a Sunday morning and included short sightseeing trips to Detroit, Buffalo, Niagara Falls and Rochester. Thence it went to Geneva and Utica and arrived in Albany at 6 P. M. Wednesday. On Thursday the tour arrived in New York and left on Saturday for Atlantic City; then it went to Philadelphia. Monday it started for Baltimore, then spent two days in Washington sightseeing. The route from Washington led over the National Trail, crossing the Cumberland Valley, passing through Hagerstown and Cumberland, Md. Dayton, Ohio, was visited on Friday, and also Indianapolis. The bus arrived in Chicago on Saturday, after two weeks on the road.

Sightseeing all-expense trips are becoming popular throughout the South. Last summer Washington and Baltimore bus companies operated such excursions to Luray Caverns, Va.;

Gettysburg, Pa.; Atlantic City, N. J., and other points of interest, setting a price for the trip to cover food, lodging and transportation. From Louisville and Lexington, Ky., a bus line operates such trips to Mammoth Cave and to other places.

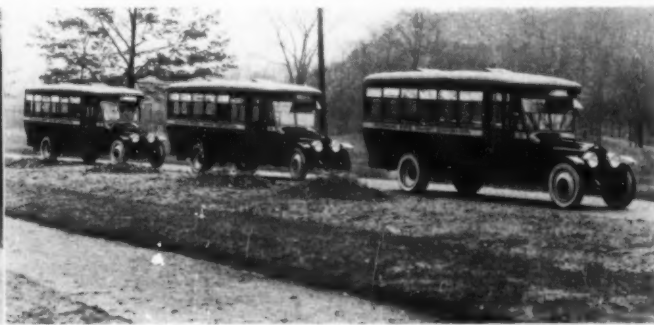
This winter will probably see the greatest influx of motor tourists the South has ever experienced. The primary reason for this is the interest that has been aroused throughout the



IN THE SERVICE OF THE STONE MOUNTAIN LINE, RUNNING FROM STONE MOUNTAIN, GA., TO ATLANTA.

progress is made along these lines the service will compare more and more favorably with railroad operation.

Buses are being put to many and varied uses. For instance, many Southern hotels in towns and cities located some distance from the railway stations run buses for the convenience of their guests. Some of these hotels operate the buses without cost to the rider, while others make a charge of 25 cents a trip one way. The buses meet all the trains, and



PART OF A FLEET OF 20 BUSES OPERATING IN RICHMOND, VA.

country by the Florida boom. Then, too, the word has been spread about concerning the development of improved highways in many of the Southern states. The improvement program in North Carolina, entailing an expenditure of possibly \$150,000,000, has received wide publicity in the trade papers and daily press throughout the country and has drawn the attention of great numbers of tourists to the South. As a result the popularity of the South is increasing as the winter playground of America.

One of the chief benefits from tourist travel in this section will be the large amount of favorable publicity and advertising it will afford. Those who have traveled the improved highways of the South have told others, and they, too, have come and the number steadily increases. Finally, many of those who come to tour and to winter in the South will return to stay, or to invest or start business enterprises. The establishment of tourist camps in cities and towns has stimulated traveling by automobile and bus, yet many people prefer to stop at the hotels. Fortunately, with the general expansion in industry and building in the South, the erection of modern hotels has kept pace, and today in most of the states there are modern types of hotels within comparatively short motoring distances.

In North Carolina a veritable network of motorbus lines operates throughout the entire state. There is scarcely a town of any size that hasn't a "terminal" to take care of travelers over the open road. These lines have been of immeasurable value to the traveling salesman. Formerly, by trains it was possible to cover one or at most two towns daily. The entire system of bus lines in North Carolina is operated smoothly through well-planned connections and extension services. Time-tables have familiarized travelers with practically all of the important routes. Hence, it is possible to go from practically one end of the state to the other with the minimum amount of delays due to bad connections and through lack of accurate information concerning schedules.

By the last of this month there will be a state-wide bus schedule published in North Carolina, according to plans made at a recent meeting of the North Carolina Bus Owners' Association. It is also planned to have all operators supplied with uniforms and a designation committee will draw up a driver's code.

In Maryland the systems of bus lines have been very well arranged by big private companies and by public utilities.

There are many states, however, that have not yet undertaken to co-ordinate the operation of individual lines so that good connections may be made at the various towns. As

are patronized largely by the traveling public. Painted along their sides, and the front and rear, are signs advertising the hotel, so that as they pass and repass through the streets they widely advertise their respective hostleries.

Companies are now forming chains of hotels in the various Southern states, these hotels being located in towns and cities within short motoring distance. The firms managing the hotels in some cases are using a word such as "Dixie" to identify every hotel in their chain, the members of the group being designated "Dixie-Southern," "Dixie-Central," etc.

Modern hotels in towns with bus lines radiating to various points are enjoying splendid business, because traveling men can make these towns their headquarters and cover places for many miles around conveniently and quickly.

Department stores are using buses to bring customers to their stores, operating in some instances through the downtown business sections to carry people to their stores in distant parts of the city. These buses are operated without charge to passengers. A Richmond store during December handled Christmas crowds in this way very successfully.

During the past year many lines have been consolidated and a controlling company organized to handle bus traffic in certain sections of the different states. A notable consolidation was one affecting buses operating in western Maryland, and another included seven lines operating in central North Carolina. These consolidations seem to be the forerunner of many more which will put the motorbus industry on a further sound basis. Equipment in these instances will be standardized, ruinous competition is expected to cease, better service to the public will result, and old types of buses will be replaced with modern coaches, built complete with all safety appliances and every device for the comfort of patrons.

Many lines are now issuing time-tables and schedules prepared after the style of railroad time-tables. The public, however, has difficulty in obtaining this information until it gets to the town from which the lines operate. Plans are afoot for printing time-tables covering bus lines throughout each of the various states—in fact, in some states such schedules have already been printed and distributed. The chambers of commerce in the various cities and towns are co-operating in this work.

With the motorbus has come the motorbus terminal, and the South is taking the lead in the construction of structures of beauty, utility and completeness. North Carolina has a law requiring buses to take and discharge passengers at a

central station in the towns and cities they serve. As a result, the lines serving certain towns have combined to establish terminals that are operated for mutual benefit. These terminals are everything to motorbus transportation that a railway station is to railroad transport. Waiting rooms, ticket rooms, baggage rooms, restaurants, stores and covered dispatch space are included. Some of them have garages and filling stations so that necessary repairs may be handled, and gasoline, oil, water and air supplied when needed. And some terminals, where all-night service is available, have sleeping quarters for mechanics and drivers.

Out of the terminal at Nashville buses run to various cities and towns within a radius of 100 miles. From a terminal at Muskogee one line carries more than 200 passengers on routes totaling 600 miles daily, and one of its buses in four years has covered more than 140,000 miles. From the terminal at Orlando, Fla., there are 160 arrivals and departures daily, the lines covering 3000 bus miles per day, 40 vehicles being used. A \$250,000 bus terminal is now under construction in Baltimore. In Welch, W. Va., a splendid terminal has been established, with 32 buses departing and arriving and 400 to 500 persons handled daily.

Indianapolis has one of the finest bus terminals in the country, and many lines from the South reach it. Here 8000 to 10,000 persons arrive and depart daily, 100 cars being in service. It is said to represent an investment of \$2,000,000. From Charlotte 100 buses travel daily in each direction,

complete transportation systems in the South. Seventy de luxe buses, each carrying 22 passengers, ply between Florida cities and Hollywood daily. The Hollywood Realty Company operates the buses throughout the state and in addition has brought passengers from cities as far distant as 1500 to 1800 miles. Hollywood was one of the first real estate developments in Florida to use buses on a large scale as a part of its sales campaign.

The idea of bringing visitors to Hollywood by buses was initiated because it was felt that many people would come to Florida, and become interested in the state, if they were given the opportunity to visit and inspect it without cost or obligation, and such a trip along the East Coast would be both educational and interesting, with transportation, the big item in traveling, furnished free. In October, 1921, the first bus began operating, and additional buses have been put on until 70 now comprise the fleet. The transportation department is naturally one of the big departments at Hollywood and employs several hundred men—mechanics, drivers, conductors and office employees. The department keeps in touch with every bus on the road, and on large maps with highways heavily outlined each bus is followed in its travels. Hollywood operates a large bus terminal in Jacksonville, and visitors from the North are there transferred from the trains to buses.

Between Daytona Beach and twenty-two other Florida cities, Daytona Shores, another Florida land development,



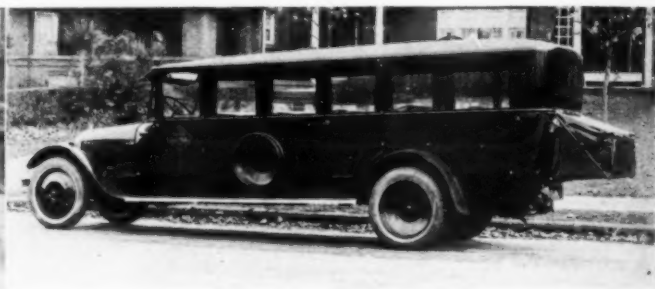
ONE OF THE FINE NEW BUSES OPERATING IN FLORIDA.

handling more than 3000 persons; many automobile touring cars are employed in addition to buses on trunk lines. Fifteen buses ply between Gastonia, N. C., and points in every direction, traveling on an average of 2200 miles daily. From a small South Carolina town 12 cars cover 1200 miles daily. There is express service between Norfolk and Richmond via Newport News, a distance of 183 miles, for the round trip, and there are two trips daily. In the Virginia peninsula the Peninsula Transit Corporation, Lee Hall, Va., operates a local and express bus service, serving 500,000 people. Train and steamship connections are made at various stops and at terminals with other bus lines.

Lines radiate from terminals at Columbia and Greenville, S. C.; Valdosta, Ga.; San Antonio, Texas; Covington, Ky.; Dallas, Texas, and from many other cities and towns.

Real estate companies in Florida and other Southern states are increasingly utilizing motorbuses to haul thousands of "prospects" to the projects. Because of the great distances sometimes covered from Northern and Western cities, the comfort of the passengers is an important consideration. Therefore, buses of the best type, luxuriously finished and equipped with all that makes for convenience and safety, are used. As a rule, these buses are operated without charge, taking prospective purchasers to and from the land developments. In addition, scores of buses are regularly employed in carrying homeowners in these subdivisions to and from the larger cities where many of them work.

Hollywood-By-The-Sea, a four-year-old community north of Miami, maintains and operates one of the largest and most



TYPE OF BUS OPERATING IN OKLAHOMA.

operates a fleet of parlor cars on regular schedules, bringing about 750 persons to Daytona Beach weekly. Other cities are being included in the schedules from time to time as the service is expanded.

To one Florida real estate subdivision recently a single bus brought passengers in one day who purchased lots totaling \$81,000. This land was sold literally and figuratively by advertising and transportation. The motorbus has proven itself a successful vehicle of real estate salesmanship. The advertising value of such vehicles is also big. Practically all of the buses used by the various companies are painted in distinctive colors and designs, and along the sides, back and front are painted in outstanding letters the names of the respective subdivisions. Hence, in passing along the roads and through the various towns and cities these buses are widely advertising each project to countless numbers of people.

The development of Tennessee highways has been attended by a remarkable growth of motorbus transportation. Already forty towns of considerable size may be reached by bus from Nashville, and almost as many from Chattanooga and Knoxville. Except for a few gaps, one may now travel by this means of transportation from Bristol, in the extreme north-east portion of the state, to Memphis, in the southwestern part, a distance of 550 miles. Of course, the development of such transportation has been greatest in the comparatively flat and level section of middle Tennessee, and naturally there the roads are in the best condition. Following the completion of important roads now under construction in west

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Tennessee, the service will be developed on an extensive scale. There are fourteen individual lines or companies operating out of Nashville, using about 100 vehicles of various sizes and types. A number of vehicles are seven-passenger type, and there are twenty buses of from eleven to thirty-five passengers each. Between Nashville and Old Hickory, a distance of 18 miles, the most luxuriously equipped motor-buses are now run, the fare being only fifty cents. Between



NEW TYPE OF TERMINAL STATION.

Office, garage and sleeping quarters for mechanics and drivers are provided.

Nashville and Shelbyville there are four 22-passenger buses, maintaining a regular schedule over a 66-mile route for a fare of \$1. From Nashville to Murfreesboro six 26-passenger buses operate a distance of 31 miles for fifty cents. Six 11-passenger buses travel 46 miles to Columbia for \$1.25 for the trip. The longest line out of Nashville is to Sparta, a distance of 104 miles, traveled by seven 7-passenger buses, the fare being \$4. Other lines traveling long distances go to Carthage and Red Boiling Springs.

Memphis, Chattanooga, Knoxville and Bristol each have a large number of lines radiating from them. From Memphis one may go by bus to points in Mississippi and Arkansas, and one line has for its destination St. Louis, Mo. Buses on regular schedules leave Springfield and Clarksville for Hopkinsville, Russellville and Bowling Green, Ky., where connections may be made for Louisville.

From Lawrenceburg, Tenn., there is a regular service to Florence, Ala., and Muscle Shoals. Chattanooga is connected with several lines which penetrate Georgia as far as Rome, Dalton, Chickamauga and Lafayette. From Bristol there is service to Bluefield and thence into the central part of West Virginia, so that seven states—Tennessee, Missouri, Kentucky, West Virginia, Virginia, Georgia and Alabama—are linked by practically an unbroken series of bus lines.

The Midland Trail Transit Co. and the New River Transit Co. of Charleston, W. Va., traverse five counties of southern West Virginia over lines aggregating nearly 200 miles, along which are scores of important towns, cities and industrial plants. This motor-coach service has made this section of the state one big community. Hourly buses depart for Huntington and intermediate points west and Cedar Grove and intermediate points east. The Ward-Way Lines, operating eleven cars out of Muskogee, during July covered a total of 35,911 miles, carried 9337 passengers and paid a gasoline tax for the month of \$71.82. The Tri-State Transit Co. of Shreveport, La., has established lines in north Louisiana, east Texas and south Arkansas.

The extent of business done by bus lines is shown in a recent announcement by the Towns Bus Lines of Harrisonburg, Va., which operates over the 400-mile stretch between Winchester and Bristol, to the effect that 180,000 passengers

had been hauled last year to December 15. Receipts for the year exceed \$150,000, as compared with about \$30,000 four years ago. Initially, the lines owned a few old buses. Now the most modern buses, with a total value of about \$150,000, are operated.

The permanence and dependability of Southern bus lines is revealed in the many advertisements and schedules of services in the Southern papers. Many companies are using a quarter to a half-page daily for schedules and educational campaigns in the interest of bus transportation. Operators are organizing state-wide bodies to foster bus transportation, to see that the various companies maintain proper schedules, to encourage the employing of capable drivers, and in every way possible to assist in building the new industry on a permanent and safe basis.

Adequate transportation has been a major factor in the establishment of consolidated schools throughout the South. Through the use of good roads and automobile buses, the erection of better schools has been made possible, as well as the employment of separate instructors for the various grades and the establishment of a diversity of courses. These things were impossible in the one-teacher, one-room school houses. Throughout the country 20,000 buses are now used by schools. In North Carolina alone in 1924 there were 634 white consolidated schools; of these 343 employed more than six teachers, 161 five or six teachers and 130 four teachers. There were also 57 negro consolidated schools. In that state there is a growing tendency toward larger schools. The number of consolidations in 1923 increased over 1922 by 132. In 1924 the increase was 176. In 234 North Carolina schools there are in use more than 1300 buses.

The use of buses to transport pupils of the consolidated schools in North Carolina is but typical of the development under way throughout the South. Mississippi is using for 608 schools 1539 buses, South Carolina schools are using more than 300 buses, Alabama 450, Arkansas 84, Florida 328, Georgia 530, Kentucky 200, Louisiana 550, Tennessee 150, Virginia 400 and West Virginia 588.

Program for Good Roads Week.

The program of the American Road Builders' Association, which will hold its convention during "Good Roads Week" in Chicago January 11 to 15, 1926, has been announced. It comprises problems that are peculiar to road building as viewed by both the engineers and contractors.

Thos. H. MacDonald, Chief of the Bureau of Public Roads, will discuss the problem of financing our highways; Col. George B. Walbridge of Detroit, Mich., will present a paper on the qualification of contractors in order that our highway construction may be economically handled. One of the important meetings will be in charge of the National Highway Traffic Association, and will take up the question of public safety, as well as the co-ordination of highways to railways.

The program includes descriptions of methods which have been developed during the past year, and affect the economical construction, maintenance and operation of our highways. The program will be divided into two divisions—one given over to engineers and engineering problems and the other to constructors' problems and methods.

To Sell \$1,800,000 of Bonds.

Jackson, Miss.—Bonds in the amount of \$1,800,000 will be sold by the Board of Supervisors of Hinds county, at its office in this city, on January 13. These bonds are a portion of a \$4,000,000 issue voted for good roads, the board reserving the right to sell only \$600,000 of the issue, instead of \$1,800,000, provided the legislature in the meantime authorizes an extension of time for disposing of bond issues.

Nearly \$5,000,000,000 Invested in Developing the Country's Highways in Five Years.

By HOWARD L. CLARK.

One of the greatest investments which the people of this country have made in recent years is that of building good roads. For every dollar expended in this public benefit the people of the country are receiving immeasurable returns in better and freer transportation facilities, reducing the cost of hauling, making accessible suburban and country districts and thus aiding in the creation of wealth through enhanced property values. Easy and accessible transportation is a contributing factor in binding the widely scattered states and sections of our country into a homogeneous whole, and in this respect modern highways and the automobile, with the greatly enlarged population of today, are playing as important a part as did the railroads, telegraph and telephones of past years. Therefore, vast as has been the amount of money appropriated by the Government for the building of good roads, it has been money well spent.

In the last several years this country has been investing in good highways at the rate of between \$900,000,000 and \$1,000,000,000 annually. In 1924 over \$900,000,000 was expended in road work (state, county and Federal-aid projects), and over \$320,000,000 of this amount, or about one-third of the country's total highway expenditures, was devoted to good roads work in the Southern states. The South is now appropriating six times what it was spending for similar purposes 10 years ago and \$80,000,000 more than the whole country spent on good roads as late as 1914.

The foregoing figures represent the total highway expenditures, including state, county and Federal-aid funds devoted to good roads work. Federal-aid road projects—that is, those state highways which are entitled to receive Federal money toward their construction—for the fiscal year ending June 30, 1925, were completed at a total cost of \$242,937,000, of which the Federal Government contributed \$111,305,000. More than 11,328 miles of roads were completed during the last fiscal year, which established a new record. The past year's work brings the total mileage completed since the passage of the first Federal-aid Road Act in 1916 up to 46,485 miles, and in addition much has been done on the 12,462 miles under construction at the close of the year. On June 30, 1925, highway projects included in the Federal-aid program which had been approved, completed or under construction amounted to a grand total of \$1,182,330,000 for the continental United States, the Federal-aid proportion being \$517,899,000. This expenditure covers 61,123 miles of highways which have been approved, completed or those under construction at the end of the last fiscal year.

FEDERAL-AID MILEAGE COMPLETED IN FISCAL YEAR 1925 COMPARED WITH TOTAL MILEAGE COMPLETED IN 1924 BY THE STATE HIGHWAY DEPARTMENTS.

Group of States.	Federal-aid mileage completed fiscal year 1925.	Mileage completed by State Highway Departments, 1924.	Ratio of Federal aid to total state program. Per cent.
New England.....	256.2	622.9	41.2
Middle Atlantic.....	571.4	1,878.1	30.4
South Atlantic.....	1,272.7	3,240.7	39.3
East North Central.....	1,293.7	4,259.3	30.4
West North Central.....	2,561.3	5,079.3	50.5
East South Central.....	1,149.8	1,525.6	75.5
West South Central.....	2,096.1	3,187.1	65.7
Mountain.....	1,626.2	2,075.3	78.5
Pacific.....	501.2	1,295.7	38.6
Total.....	11,328.6	23,164.0	49.0

Since June 30, 1925, up to and including September 30, 1925, more than 2769 miles of Federal-aid highways have been completed at a total cost of \$53,648,351, \$24,493,628 of this being Federal-aid funds. During this period there were

completed in the South 1224 miles of Federal-aid highways at a total cost of \$25,812,736, the Government's portion being \$11,682,690. Federal-aid projects under construction on September 30 amounted to \$395,698,944, and more than \$156,000,000 of this was in the Southern states. The total mileage under construction on September 30 in the entire country was 16,710 miles, 6809 miles being in the South. The Government's appropriation for this work was \$171,444,000 for the entire country, which includes \$70,542,000 in the South.

HIGHWAY PROJECTS RECEIVING FEDERAL AID APPROVED, COMPLETED AND UNDER CONSTRUCTION JUNE 30, 1925.

States.	Total Cost.	Federal Aid.	Miles.
Alabama.....	\$21,721,118	\$10,504,804	1,441.4
Arkansas.....	21,111,304	8,912,138	1,479.7
Florida.....	11,863,045	5,776,198	348.2
Georgia.....	31,925,252	15,179,822	2,233.8
Kentucky.....	23,721,026	10,226,093	923.9
Louisiana.....	15,881,667	7,189,935	1,100.4
Maryland.....	11,388,605	5,254,170	436.5
Mississippi.....	19,941,449	9,805,982	1,336.3
Missouri.....	45,255,850	19,874,012	2,006.5
North Carolina.....	30,687,730	12,938,571	1,380.5
Oklahoma.....	28,680,691	13,427,421	1,210.8
South Carolina.....	18,580,841	8,414,937	1,644.3
Tennessee.....	26,153,419	12,319,834	920.6
Texas.....	81,938,512	32,528,591	5,001.5
Virginia.....	24,932,018	11,592,157	1,083.6
West Virginia.....	14,604,159	6,163,018	525.8
Total South.....	\$428,386,686	\$190,107,683	23,693.8
Maine.....	\$9,325,489	\$4,451,898	323.5
New Hampshire.....	5,284,960	2,511,946	243.2
Vermont.....	4,661,616	2,182,636	143.3
Massachusetts.....	20,148,478	7,080,748	395.7
Rhode Island.....	5,088,996	1,773,728	100.1
Connecticut.....	6,861,371	2,524,368	138.7
Total New England.....	\$51,370,914	\$20,525,324	1,344.5
New York.....	\$65,318,395	\$24,342,801	1,577.5
New Jersey.....	22,505,603	7,405,570	301.9
Pennsylvania.....	\$1,009,259	26,435,248	1,534.7
Delaware.....	5,653,542	2,042,696	138.3
Total Middle Atlantic.....	\$174,486,799	\$60,226,225	3,552.4
Ohio.....	\$54,372,726	\$19,963,786	1,576.2
Indiana.....	29,340,488	14,176,645	878.2
Illinois.....	48,478,045	22,747,453	1,524.0
Michigan.....	31,293,535	14,404,492	1,088.1
Wisconsin.....	27,149,828	11,543,733	1,722.4
Total East North Central.....	\$190,544,622	\$82,836,109	6,788.9
Minnesota.....	\$39,922,010	\$16,803,842	3,551.5
Iowa.....	35,717,256	14,880,629	2,521.0
North Dakota.....	14,921,438	7,337,459	2,479.9
South Dakota.....	20,039,774	9,912,404	2,513.9
Nebraska.....	19,063,120	9,162,941	2,462.7
Kansas.....	39,625,021	15,268,992	1,444.5
Total West North Central.....	\$169,288,619	\$73,336,267	14,973.5
Montana.....	\$13,257,682	\$7,421,424	1,221.5
Idaho.....	12,263,217	6,610,752	792.1
Wyoming.....	13,171,039	7,484,820	1,293.4
Colorado.....	16,659,762	8,455,719	863.5
New Mexico.....	13,276,986	7,927,932	1,488.0
Arizona.....	12,045,158	6,533,086	804.8
Utah.....	9,465,525	6,020,363	674.5
Nevada.....	10,114,638	7,488,990	824.1
Total Mountain.....	\$100,254,007	\$57,943,088	7,961.9
Washington.....	\$17,201,171	\$7,905,112	676.3
Oregon.....	18,015,424	9,254,743	970.4
California.....	32,781,772	15,765,110	1,161.5
Total Pacific.....	\$67,998,367	\$32,924,965	2,808.2
United States.....	\$1,182,330,014	\$517,899,661	61,123.2
Hawaii.....	342,277	97,440	6.5
Grand total.....	\$1,182,672,291	\$517,997,101	61,129.7

ern states. In addition, highway projects involving Federal-aid, approved for construction September 30, totaled 2263 miles, 877 miles being in the South. The estimated cost of this work for the entire country was \$45,943,000, more than sixteen and a half million being in the South, and the Government's portion was \$16,921,000, of which \$6,357,000 was approved for road work in the Southern states.

On September 30 the Bureau of Public Roads reported a balance of Federal-aid funds available under the Highway

Act of \$59,002,000, of which \$11,862,000 is allotted for road work in the South.

According to the Bureau of Public Roads, the Federal-aid highway system is now two-thirds improved. The mileage of this system as limited by law is 200,349 miles, which was 7 per cent of the total mileage of highways in the United States at the time of the passage of the Federal Highway Act. When the system was designated it was hoped that its improvement could be completed within 10 years. The Bureau of Public Roads states that this hope will be realized and that within five more years there will be a continuous interstate highway system connecting every city of 5000 population or larger and every section of it improved to a degree consistent with the density and character of the travel.

One of the important facts brought out in the annual report of Thomas H. MacDonald, Chief of the Bureau of Public Roads, is that motor-vehicle taxes alone are sufficient to match Federal appropriation. That the proportion of Federal funds on the basis of \$75,000,000 a year does not unduly tax the resources of any state is clearly shown in a statement prepared by Mr. MacDonald. It is pointed out that in matching the Federal appropriation the states do not incur a greater expense for highway improvement than would otherwise be the case, for practically all states expend greater amounts for other highway work which does not receive Federal aid. Federal participation has in no year amounted to more than 10 per cent of the nation's total expenditures for highways, and yet these funds under which Federal-aid and state supervision is rendered are rapidly connecting larger communities and different states with highways substantially built and properly maintained.

HIGHWAY EXPENDITURES AND MOTOR-VEHICLE REVENUES.

(Calendar Year 1924.)

States.	State funds required to match Federal appropriation of \$75,000,000.	Gross state income from motor vehicle licenses, fees and gasoline taxes.	State disbursements for other than Federal-aid roads.
Alabama	\$1,541,870	\$3,683,462	\$1,279,000
Arkansas	1,264,164	5,101,775	7,484,000
Florida	892,878	6,077,610	4,724,000
Georgia	1,983,089	7,059,737	3,021,000
Kentucky	1,411,607	4,894,317	9,970,000
Louisiana	997,262	4,125,668	5,743,000
Maryland	635,783	3,921,375	8,477,000
Mississippi	1,291,960	3,173,825	431,000
Missouri	2,417,727	4,525,914	17,469,000
North Carolina	1,699,108	9,143,569	29,883,000
Oklahoma	1,415,000	6,712,180	958,000
South Carolina	1,052,549	3,338,120	3,037,000
Tennessee	1,622,985	4,410,105	4,244,000
Texas	4,415,715	14,266,766	11,880,000
Virginia	1,449,713	7,104,744	10,771,000
West Virginia	797,295	4,106,331	12,559,000
Total	\$24,888,745	\$91,655,698	\$131,930,000
Continental United States	\$66,716,295	\$304,467,082	\$392,272,000
Per cent in South	37	30	33

Attention is called to the great benefit to the people of the United States of Federal inspection under the Federal Highways Act. The maintenance of a road after completion is as important as its original construction. Every Federal-aid project is inspected by Federal engineers, and state authorities, without exception, have promptly remedied any defects when discovered. Proper upkeep of modern highways is now a paramount consideration, for it not only saves the original investment of the people in roads but it also keeps the road in condition for the greatest service for which it was intended.

Large Volume of Southern Road and Bridge Work Shown in Publication of 14,000 News Items.

A major part of the building expansion and construction program in the 16 Southern states is in road, paving and bridge work. During the past 10 years this class of construction has shown a steady yearly increase, and, considering the large amount of money involved in contracts awarded during the last three months of 1925, it will play an equally prominent part in the 1926 program. Last year individual news items published in the Daily Bulletin and in the construction columns of the MANUFACTURERS RECORD on these two closely allied classes of construction numbered 14,176, including 3174 bridge, culvert and viaduct notices and 11,002 road, paving and street announcements.

During the year 89,975 individual items, covering all classes of construction work, were published, a total exceeding by more than 18,000 items the previous high total of 71,393 separate reports for 1924. Thus, road and bridge construction items constituted nearly one-sixth of the total reports in 1925. In 1924, with 12,980 separate items, covering road and bridge work, this represented also about one-sixth of the total of items of all kinds.

The steady increase in road and bridge construction in the South in the past decade is clearly indicated by a study of the summary herewith. In 1916 a total of 4187 items was published. In 1921, when construction of this character was undertaken on a big scale to provide employment for many persons then without work in the several states, 5630 items were published. Soon construction in other lines took on new life and the South moved forward at a pace that has been increasing steadily ever since, and the peak has not yet been reached. Thus the road and bridge items in 1925 are nearly three times as great as in 1921.

Considering road and street items by months for last year,

April holds first place, the total being 1364. July is second with 1150 notices and October third with 1050. In March 1024 items were published. So activity continued throughout the year at high levels.

The greatest number of bridge, culvert and viaduct notices appeared in March, the total being 370. In October 333 items were published concerning this work. April comes next, with a total of 309.

Viewing the road and bridge program by states, as revealed by the number of items, Florida stands first with a total of 2989, including 491 bridge and 2498 road reports. The Texas highway improvement program of last year is represented by 2240 notices, comprising 406 bridge and 1834 road reports, which places that state second to Florida. In Missouri the big highway development under way is indicated by the publication of 1775 notices, including 454 bridge and 1321 road items. In 1924 Missouri stood first with a total of 1984 items, Texas second with 1896 notices and Florida third with 1580.

Throughout the 16 Southern states from Maryland to Texas road and bridge work is claiming more and more attention. In several states that have not yet voted bond issues for a comprehensive system of improved highways vigorous campaigns are under way to encourage such voting and thus provide for the launching of highway development on a big scale in the interest of the prosperity of the people. In states like Missouri, Maryland, Texas, North Carolina, Florida, Louisiana, Virginia and others, where already big mileages of improved highways have been completed, construction of this character is going forward steadily. Some states have cast aside the programs as outlined several years ago and have materially increased their expenditures in an

endeavor to build better highways to meet the needs of the motoring public. In several instances bonds have been sold far in advance of the date initially set for the issues to be made available for road work. Additional state-wide bond issues have been voted in several states. The prosperity and general advancement that has come about in states that have undertaken ambitious road programs has inspired other Southern states to undertake similar improvements in a big way. The outlook for this year for a continuation of road and bridge building at the high level set last year is very bright, and there is reason to believe, judging from the vast amount of new work announced during the last two months of 1925, that this year will see the largest amount of highway improvement work ever undertaken.

The tables herewith, covering these two important classes of construction work, show what the South is doing and plans to do in building continuous highways throughout the length and breadth of the various states.

NUMBER OF ROAD AND BRIDGE ITEMS.			
Year.	Roads.	Bridges.	Totals.
1925	11,002	3,174	14,176
1924	9,441	3,539	12,980
1923	8,161	2,689	10,850
1922	7,539	2,197	9,736
1921	4,601	1,029	5,630
1920	3,331	664	3,995
1919	4,439	597	5,036
1918	1,572	367	1,939
1917	2,293	495	2,788
1916	3,328	859	4,187

The accompanying tables show the number of road and bridge items reported by states monthly during 1925:

BRIDGE AND CULVERT CONSTRUCTION ITEMS PUBLISHED IN 1925.

State.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Alabama	18	6	13	12	11	4	13	5	12	5	4	15	118
Arkansas	1	5	1	4	1	6	32	12	9	1	4	68	
Florida	50	34	50	25	17	31	67	18	26	86	31	56	491
Georgia	14	7	13	17	9	12	8	6	4	9	8	10	109
Kentucky	4	4	6	21	4	3	12	1	1	9	5	12	62
Louisiana	14	15	12	13	10	13	15	19	12	10	6	17	146
Maryland	3	7	38	5	13	5	2	3	12	3	1	6	88
Mississippi	6	7	8	8	10	11	5	8	11	18	11	6	109
Missouri	21	34	44	49	48	39	44	44	40	33	4	54	454
N. Carolina	15	6	8	7	3	13	7	9	4	12	9	14	107
Oklahoma	21	8	28	30	13	13	3	11	6	28	28	11	200
S. Carolina	16	19	28	19	70	15	16	15	25	36	8	18	285
Tennessee	36	14	31	23	8	5	26	20	16	6	12	24	221
Texas	44	25	48	31	65	14	25	23	22	51	22	36	466
Virginia	5	10	14	8	3	5	6	2	7	12	5	14	91
W. Virginia	7	34	28	37	12	18	25	24	12	6	8	8	219
1925 totals	275	235	370	309	297	267	296	210	262	333	163	277	3,174
1924 totals	263	171	201	184	323	283	409	438	348	415	198	305	3,539

ROAD AND STREET CONSTRUCTION ITEMS PUBLISHED IN 1925.

State.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Alabama	61	55	49	59	57	31	53	24	33	33	17	15	467
Arkansas	14	13	13	31	23	25	24	9	24	14	19	18	226
Florida	174	199	221	236	263	223	265	177	154	284	182	180	2,498
Georgia	23	15	17	44	23	34	28	19	57	65	69	59	453
Kentucky	9	10	19	119	21	61	36	14	27	16	13	15	369
Louisiana	35	23	29	49	42	36	45	33	38	44	33	36	443
Maryland	18	11	78	113	67	31	32	24	25	28	8	7	442
Mississippi	26	45	35	62	25	35	38	21	24	36	18	30	395
Missouri	63	120	132	135	100	149	155	126	116	97	41	67	1,321
N. Carolina	29	22	34	71	59	46	35	47	53	57	30	31	514
Oklahoma	34	30	50	45	30	37	11	14	30	38	14	12	345
S. Carolina	36	17	24	31	24	20	32	47	38	40	26	19	354
Tennessee	45	33	41	56	36	25	69	28	38	19	31	12	433
Texas	233	92	117	158	120	117	230	113	144	225	134	151	1,834
Virginia	17	23	32	57	22	33	28	16	14	14	12	30	297
W. Virginia	14	27	113	98	39	47	129	45	46	40	12	10	620
1925 totals	831	714	1024	1364	950	950	1150	757	861	1050	659	692	11,002
1924 totals	534	588	768	661	1121	813	1041	798	762	926	627	802	9,441

\$1,750,000 Good-Roads Bond Election.

Monroe, La.—Ouachita parish on February 2 will vote on a bond issue of \$1,750,000 for improving 97 miles of highways, which will place the system here on a par with the best in the state or in the entire South. On the same date the city of Monroe will vote on an \$800,000 issue to provide for a new school, a new filtration plant and similar improvements.

Florida's Safety-Grade Crossing Device Attracts Nation-wide Attention.

A safety-grade crossing installed by the Florida State Road Department on State Road No. 1 at Cottondale has attracted widespread interest. Wherever possible it has been the policy of the department to cross railroads overhead or by underpasses. Much attention, however, has been given to methods for rendering safe such crossings as could only be

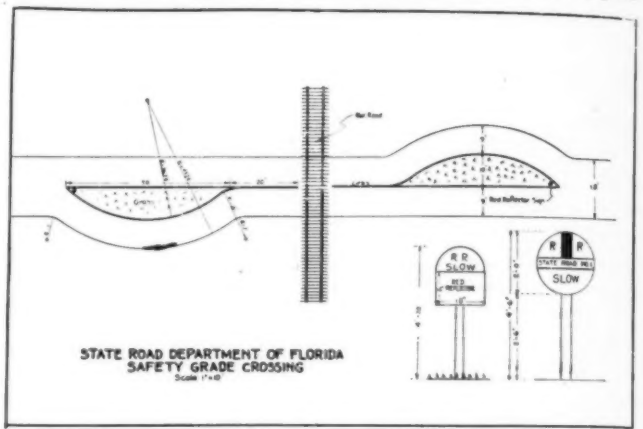


CHART SHOWING PLAN OF OPERATION.

made at grade. The safety-grade crossing at Cottondale is the result of this study. It consists of two parkways, each a segment of a circle, one on either side of the railway track, and enclosed by a concrete curb, making little islands in the highway. At the outside of the road, and following the curve of the parkways, is a very heavy woven-wire fence, sufficiently strong to prevent an automobile from running upon the tracks should it fail to slow up enough to make the curve. The parkway curb commences at a point about 70 feet from the railroad ties on each side of the roadbed and follows the center line of the highway to the end of the ties. Another section of curbing begins at the same point and intersects the first section of the curb 20 feet from the end of the ties. The greatest distance between these curbs is about ten feet.

At the end of the parkways farthest from the tracks a sign warns the motorist of the crossing, and at night a reflector placed at the same point gives the danger signal.

The design is such as to permit the beautifying of the parkways enclosed by the curbs with grass, flowers or shrubs as desired. The fence wire and posts are painted white, as is the railroad sign, and the warning, "Slow Up and Live," is printed in red letters. It is said the design is so simple and so practical that the majority of motorists declare it to be the best slowing-up device yet seen. It is pleasing to the eye and comparatively inexpensive to install.

Many requests have been received, according to J. L. Cresap, State Highway Engineer, who designed the crossing, for detailed information and blueprints. It is reported that one of the country's big railroads has adopted the device as standard on its lines.

To Issue \$2,000,000 of Bonds.

De Land, Fla.—Steps have been taken by the commission of Volusia county for the issuance of more than \$2,000,000 of bonds for road construction. Bids will be received by the commission until January 18 for building a 30-mile road in the Halifax-St. Johns district, while new plans have been ordered drafted for the Helen-Osteen road, to extend a distance of nine miles. Bonds in the amount of \$110,000 were voted about two years ago in the Lake Helen district for the construction of this road, but it was found that the sum would not be sufficient to complete the project.

\$237,000,000 in 1925 Road Contracts South.

HUGE SUM INVOLVED IN SOUTH'S HIGHWAY PROGRAM—TOTAL FOR SIMILAR WORK IN PAST FOUR YEARS \$750,000,000—BIG PROGRAM ASSURED FOR 1926.

Contracts awarded for road paving and bridge work in the 16 Southern states last year set a new high record, with a total valuation of more than \$237,700,000. This compares with awards for the preceding year of \$183,680,000 and with \$174,600,000 and \$157,000,000 representing contracts let for similar work in 1923 and 1922, respectively.

These figures are compiled from items published in the Daily Bulletin and in the construction columns of the MANUFACTURERS RECORD, and do not include individual projects involving the expenditure of under \$10,000, nor has any attempt been made to allow for the cost of projects for which no figures were available. Thus, it is safe to estimate that the total awards for all classes of road paving and bridge work in the 16 Southern states during 1925 were in excess of \$350,000,000.

During the past year preliminary announcements on contracts to be let aggregated \$385,800,000, compared with \$178,200,000 representing proposed construction announced in the preceding year and with \$194,000,000 and \$192,000,000, the totals for similar work in 1923 and 1922, respectively.

In the last three months of 1925 contracts totaling more than \$76,000,000 were let, or about one-third of the total valuation of awards for the year. In the same period preliminary announcements were made concerning projects to involve the expenditure of more than \$210,000,000, or over half the total for the entire year. These figures show definitely the big amount of such work to be undertaken in 1926, for not only were awards in the last quarter of the year at a high level, but proposed work also showed a remarkable increase. In addition to the construction work now under way on projects let to contract last year, many of which will not be completed until this summer, construction will start as soon as weather conditions permit on scores of projects contracted for during November and December. Moreover, awards will be made throughout the South early this year for scores of large projects, necessitating the expenditure of millions of dollars.

Awards in November set a new record, amounting to over \$37,000,000. This record is the more outstanding when it is considered that September awards totaled over \$30,000,000 and October contracts had a valuation of \$26,200,000. Awards in the last two months of the year total more than \$50,000,000, compared with \$33,000,000 for contracts let in the first three months of 1925.

Similarly announcements concerning proposed road work established a new high record in November, the total amount of money involved exceeding \$112,000,000. In December similar announcements amounted to \$75,000,000, placing that month second in the money column.

Road and bridge building throughout the South is keeping pace with the tremendous expansion in industry and new construction in this section. Awards in 1925 exceeded awards in the preceding year by more than \$50,000,000, or by about 30 per cent, and the valuation of building permits issued in the South for all classes of construction in 1925 is 20 to 30 per cent greater than the 1924 total. In the past four years, 1922 to 1925, inclusive, actual contracts for road and bridge work, not including any individual project costing under \$10,000, amount to more than \$750,000,000.

A study of the figures herewith reveals that the major part of the contracts awarded is in the last half of the year. In place of the normal seasonal slackening in the fall and winter months, there was a big increase in the amount of work begun and in contracts placed. There is thus abundant

evidence that the road and bridge building program in the South during this year will be the greatest ever undertaken. Vigorous campaigns in the interest of bonds to finance road work in those states that have lagged are now under way. The gasoline tax, now so generally employed, is supplying vast sums to finance construction of new roads and maintain established highways. In those states where the good roads program has already done much to advance the prosperity and progress of the people added impetus has been given, and counties, districts and cities are combining in an effort to push the improvement program until there shall be a network of improved roads and bridges throughout the length and breadth of these states.

The tables show the present road-building program in the South as suggested by the award of contracts and the announcements concerning proposed work, and also indicate the increase in such activity during the past four years.

COMPARATIVE RECORD OF ROAD AND BRIDGE CONSTRUCTION SOUTH—1925.

	Contracts Awarded.	Contracts to be Awarded.
January	\$11,941,128	\$26,293,279
February	6,650,827	12,229,435
March	15,002,850	11,762,480
April	26,082,459	16,012,507
May	22,243,988	12,511,130
June	14,498,730	20,840,746
July	17,274,240	25,068,957
August	17,112,137	10,340,926
September	30,215,100	22,791,804
October	26,245,218	39,514,284
November	37,196,298	112,593,820
December	13,255,105	75,876,667
Totals—1925	\$237,718,089	\$385,836,037
1924	183,681,538	178,261,677
1923	174,647,797	194,072,530
1922	157,119,589	192,338,574

Baltimore First City in Country to Operate Motorcycle Taxi Cabs.

One of the latest developments in motor taxi service in this country is the motorcycle taxi cab. Similar vehicles have been in operation for some time on the Continent, but the first to begin operation in the United States was started January 1 in Baltimore by the Dainty Cab Co.

Melville Stevenson, general manager of the new company and president of the Premier Cab Co., Inc., of Baltimore, designed the cab, which is attached as a side car to an Indian motorcycle, and it is understood that the Hendee Manufacturing Co., Springfield, Mass., maker of the Indian motorcycle, is planning to construct these cycle cabs for the expected establishment of motorcycle taxi cab service in various cities of the country.

The cabs are built to carry two passengers and are attractive in appearance. Advantages claimed for this type of public transportation are the comparatively small initial investment required and the low operating cost per unit, which enables the cabs to offer a greatly reduced rate. The service in Baltimore is operated on the zone system of rates, which are said to be about one-half the present standard taxi cab charges. The zone rates are the same for one or two passengers, and special rates outside of the established zones may be secured. The rate for the highest zone in Baltimore is \$1 for a distance of about eight miles, and one may ride for forty blocks or more for 50 cents.

The December letting of road contracts by the Tennessee Highway Department, Nashville, involved a total of approximately \$2,250,000, including engineering costs.

The South Sold \$153,000,000 Road and Bridge Bonds in 1925.

ALL PREVIOUS RECORDS SURPASSED—STEADY INCREASE SHOWN IN ROAD AND BRIDGE BOND SALES—CLOSE TO \$500,000,000 IN ISSUES MARKETED IN PAST FOUR YEARS.

The sale of bonds for the purpose of financing road, paving and bridge work in the South has shown a steady increase in the past four years. In 1925 a total of 428 issues, with a par value of more than \$153,000,000, was sold, representing the highest total on record. In the preceding year 475 issues were marketed, with a value of \$138,970,000, compared with \$78,200,000, representing the value of 371 issues sold in 1923 and with \$132,000,000 for the par value of 476 issues of bonds sold in 1921. Thus, in the past four years 1750 issues, with a par value of more than \$500,000,000, have been sold by Southern towns, cities, counties, districts and states from Maryland to Texas.

Considering the amount of money involved, Florida holds first place among the sixteen Southern states, with sales aggregating over \$41,000,000 for 84 issues. North Carolina is second, having sold in 1925 67 issues, with a par value of \$33,700,000. Missouri is third; road and bridge issues marketed in that state numbered six, with a total par value of \$15,000,000. In 1924 North Carolina held first place, having sold 53 issues, with a par value of \$32,700,000. Texas stood second in 1924 bond sales, with close to \$18,000,000

for 84 issues. Florida, with sales aggregating \$16,000,000, the par value of 49 issues, held third place.

That road, paving, bridge and viaduct work is proceeding in volume throughout the South is indicated by the table herewith showing bond sales for this class of construction in each of the sixteen states. West Virginia sales exceed \$13,000,000. In both Alabama and Texas sales last year are in excess of \$9,000,000, and more than \$3,000,000 in bonds for this work were sold in 1925 by Louisiana, Maryland, Mississippi, South Carolina and Tennessee.

	1924		1925	
January	44	\$14,327,265	42	\$10,113,907
February	19	3,250,000	35	11,527,596
March	27	9,783,500	30	7,628,000
April	38	6,174,508	45	8,061,000
May	42	8,574,500	45	16,158,500
June	47	21,765,000	49	21,458,000
July	51	13,585,000	46	13,948,500
August	47	9,194,000	33	12,704,000
September	40	12,153,500	33	13,023,000
October	53	9,769,500	23	6,415,500
November	34	10,972,250	16	3,330,000
December	33	19,421,000	31	20,070,000
Totals	475	\$138,970,083	428	\$153,438,000

COMPARATIVE RECORD OF NUMBER OF ISSUES AND PAR VALUE BOND SALES SOUTH
For

	1922		1923		1924		1925	
Alabama	11	\$4,980,000	21	\$4,935,875	28	\$9,674,500	18	\$9,539,000
Arkansas	31	6,032,500	19	1,871,400	21	3,245,750	22	1,770,000
Florida	46	10,950,000	52	14,385,000	49	16,356,000	84	41,362,000
Georgia	17	3,501,500	7	762,081	14	1,422,500	15	2,111,500
Kentucky	14	2,214,200	8	1,292,000	9	1,195,000	10	1,144,000
Louisiana	36	5,328,500	26	6,396,600	30	8,326,000	28	4,964,500
Maryland	16	2,369,000	12	1,231,500	19	2,564,500	12	3,083,000
Mississippi	22	3,234,000	28	3,362,480	43	4,798,500	37	6,051,500
Missouri	25	23,997,000	4	5,370,000	9	12,637,000	6	15,225,000
North Carolina	71	27,370,500	48	5,956,500	53	32,783,000	67	33,708,500
Oklahoma	10	1,973,400	7	1,420,000	10	3,501,000	8	1,920,000
South Carolina	30	4,605,000	31	5,445,000	25	6,825,000	22	3,392,000
Tennessee	26	2,629,265	24	2,231,000	45	5,295,347	33	4,560,000
Texas	99	29,890,750	58	11,805,550	84	18,174,486	42	9,402,000
Virginia	16	2,572,000	16	3,338,500	8	1,775,000	9	1,440,000
West Virginia	6	1,434,000	10	8,483,000	28	10,405,500	15	13,875,000
Totals	476	\$132,199,615	371	\$78,286,486	475	\$138,970,083	428	\$153,438,000

Record Motor-Vehicle Production Last Year.

APPROXIMATELY 20,000,000 MOTOR VEHICLES IN THE UNITED STATES—4,325,000 WERE PRODUCED IN 1925, VALUED AT \$3,000,000,000.

With a total production last year of 4,325,000 motorcars and trucks, having a total wholesale value of \$3,000,000,000, the motor-vehicle industry of the United States continues to expand. The 1925 production sets a new record, being larger than the former record output of 1923 and 19 per cent more than the production of 1924. The outstanding feature of the industry, aside from its greatly increased output, was the large number of closed cars made last year, which numbered 2,157,000, or 56 per cent of the 3,833,000 passenger cars built.

In addition to the actual construction of motorcars and trucks, there were produced 55,750,000 tires, with a wholesale value of \$886,000,000, and parts and accessories, exclusive of tires, amounted to \$1,000,000,000, which gives a grand total of more than \$4,886,000,000, and this is only the wholesale value of the main products of the motor-vehicle industry of the United States for one year.

About 3,200,000 persons are employed in the automobile industry and allied lines.

The development of the automotive industry has created

additional business for many lines and given employment to hundreds of thousands outside of its own immediate activity. About 3,040,000 carloads of automotive freight were handled by the railroads of the country in 1925, and the motor-vehicle industry consumes one-half of the plate glass used in the country, 11 per cent of the iron and steel, 8 per cent of the copper and 65 per cent of the upholstery leather. Motor vehicles consumed 7,494,000,000 gallons of gasoline and 769,000,000 pounds of crude rubber, and 226,000,000 pounds of cotton fabric were used in making automobile tires last year.

The United States exported 550,000 cars and trucks in 1925, having a total value, including parts and tires, of \$392,000,000.

This country now has 81 per cent of the 24,600,000 motor vehicles reported throughout the world.

The motor-vehicle retail business in the United States is represented by 47,014 car and truck dealers, 55,000 public garages, 75,105 service stations and repair shops and 61,617 supply stores. It has been estimated that the people of the United States are spending every year more than \$10,000-

600,000 on the purchase, maintenance and operation of motor vehicles, illustrating the vast magnitude of this one industry, which reaches into every section and community.

Some Facts of the Automobile Industry for 1925

Compiled by ALFRED REEVES, General Manager, National Automobile Chamber of Commerce.

PRODUCTION

Cars and trucks.....	4,325,000
Cars	3,833,000
Trucks	492,000
Percentage increase over 1924.....	19%
Production of closed cars.....	2,157,000
Per cent closed cars.....	56%
Total wholesale value of cars.....	\$2,500,000,000
Total wholesale value of trucks.....	\$500,000,000
Total wholesale value of cars and trucks.....	\$3,000,000,000
Tire production.....	55,750,000
Wholesale value of motor-vehicle tire business.....	\$886,700,000
Total wholesale value of parts and accessories, exclusive of tires.....	\$1,000,000,000
Average retail price of car, 1925.....	\$866
Average retail price of truck, 1925.....	\$1,350
Number of persons employed in motor vehicle and allied lines.....	3,200,000
Special Federal excise taxes paid to U. S. Government by automobile industry in 1925.....	\$126,552,000

REGISTRATION

Motor vehicles registered in U. S. (approx.).....	20,000,000
Motor cars.....	17,500,000
Motor trucks.....	2,500,000
World registration of motor vehicles.....	24,600,000
Per cent of world registration owned by U. S.....	81%
Motor vehicle registration on farms.....	4,600,000
Motor cars.....	4,160,000
Motor trucks.....	440,000
Miles of improved highway.....	495,000
Total miles of highways in U. S.....	3,002,916

AUTOMOBILE'S RELATION TO OTHER BUSINESS

Number of carloads of automotive freight shipped over railroads in 1925.....	3,040,000
Rubber, per cent of, total U. S. consumption used by automobile industry.....	84%
Plate glass, per cent of, used by automobile industry.....	50%
Copper, per cent of, used by automobile industry.....	8%
Iron and steel, per cent of, used by automobile industry.....	11%
Upholstery leather, per cent of, used by automobile industry.....	65%
Gasoline consumed by motor vehicles, 1925 (gals.).....	7,494,000,000
Crude rubber used in manufacturing tires 1925 (lbs.).....	769,000,000
Cotton fabric used in manufacturing tires 1925 (lbs.).....	226,000,000

MOTOR BUS AND MOTOR TRUCK

Buses in use.....	70,000
Motor buses produced.....	15,000
Consolidated schools using motor transportation.....	11,838
Street railways using motor buses.....	251
Buses used by street railways.....	5,000
Buses used by steam railroads.....	367
Steam railroads using motor buses.....	20
Railroads using gasoline rail motor coaches on short lines.....	190
Railroads using motor trucks as part of shipping service.....	51

EXPORTS

Number of motor vehicles exported.....	550,000
Value of motor vehicles and parts exported.. (Including engines and tires).....	\$392,600,000
Per cent increase in motor vehicles exports over 1924.....	44%
Per cent of motor vehicles exported.....	12.2%
Number of motor vehicles imported.....	630

MOTOR VEHICLE RETAIL BUSINESS IN U. S.

Total car and truck dealers.....	47,014
Public garages.....	55,000
Service stations and repair shops.....	75,105
Supply stores.....	61,617

Investigation Under Way on Development of Earth Roads.

By S. S. STEINBERG, Highway Research Board, National Research Council.

Highway engineers have long felt the need of a type of road surface that would serve for secondary or local traffic and yet be low in first cost and maintenance. Though much has been accomplished in the development of the higher-type surfaces for use on main traffic roads, comparatively little progress has been made in the methods for improving secondary or natural-soil roads, which constitute about 85 per cent of the total road mileage in the United States. In their present unimproved conditions the local roads cannot function properly as feeders to the main routes, thus depriving considerable areas and great numbers of individuals of the benefits of those portions of our highway transportation system already completed.

In view of the enormous mileage of local roads and the comparatively small amount of traffic upon them, it is evident that for many years to come it will be economically impossible to surface all these roads with the more costly types of pavements.

Realizing this fact, the state highway departments and the universities have conducted experiments for the purpose of stabilizing and protecting the surface of earth roads. These have included soil-selection methods, bituminous treatments, chemical treatments and veneer-macadam.

The objects of this investigation are to co-ordinate the efforts and data already available on the improvement of earth roads and to stimulate further research in order to find an inexpensive road surface to carry intermediate traffic. It is recognized that no single answer to this problem would serve the entire country, but that, due to the differences in soil and climatic conditions, the solutions will be matters affected by geography and geology. It is also felt that a proper solution may need to take into account the chemistry of the road itself, a field of research as yet untouched, but one which may help solve not only the earth-road problem but also many of the sub-grade difficulties encountered in the use of the more costly surfaces.

The writer's connection with this investigation has been a temporary one, and the study thus far has been preliminary and chiefly for the purpose of assembling and correlating all available information of completed, current and proposed research on earth-road treatments. No field inspections have yet been made, but the material assembled will enable the investigator to study effectively in the field the experiments completed or under way in many sections of the country.

Thus far the following work has been done:

1. Statistical material has been collected for determining the mileage of and expenditure on earth roads in the states.
2. Through the kindness of the Chief Bibliographer of the Library of Congress, and with the aid of the United States Bureau of Public Roads, a bibliography on earth roads and earth-road treatments has been prepared.
3. A search has been made in the Patent Office of all patents granted on earth-road treatments, of which about a hundred have been assembled.
4. Information has been gathered of research on earth roads now under way in various states and by universities.
5. Through the state contact men of the Highway Research Board information has been secured as to methods of earth-road treatment now in use in the states.
6. By correspondence and conferences interest in the earth-road problem has been aroused among highway engineers and researchers.
7. By radio talks and by articles in the press the attention of the public has been called to the importance of the present investigation.

The American Road Builders' Association and Its Field of Usefulness.

By WILLIAM H. CONNELL, Engineering Executive and Acting Secretary of Highways of Pennsylvania, President of American Road Builders' Association.

The American Road Builders' Association is not only the oldest road organization of standing in the country, but it is the only organization whose membership is open to everyone affiliated with the highway business. This membership at the present time consists of officials and highway engineers representing the states, municipalities and other political subdivisions, contractors, material and equipment manufacturers, automotive interests and others affiliated with the industry. This association, therefore, through its membership, ties together all of the interests, thus making its field of usefulness practically unlimited.

The highway business has grown to be one of the biggest industries in this country. The annual expenditures are about \$2,000,000,000 a year, and as this money is spent for highway transportation systems the nature of the business is such that it is the live issue of the present day.

Years ago the country was interested in building a railway transportation system that would make accessible all sections of the United States. Today the country is interested in building a highway transportation system connecting all sections of the United States, and while there are other organizations whose activities are confined to the highway business, and which are doing splendid work, notably the Association of State Highway Officials, the membership of these organizations is limited to certain branches of the industry or to certain localities.

The Highway Officials is strictly an organization of state highway officials, and should continue as such. It will always be a big factor in building up and co-ordinating the highway transportation interests of this country. But an organization, to be representative of the industry, cannot be confined to

officials or to this country. The consulting engineers, automotive interests, material and equipment interests, city, as well as the state officials, and all those engaged in the business are needed to help in solving various phases of the problems embraced in the highway business.

All the brains of the business are needed today to work out a better co-ordination of all the activities, and this can be accomplished by a closer co-operation of the American Road Builders and all other municipal and sectional highway associations that, after all, are striving for the same purpose—the building of adequate highway transportation systems.

This is a field of usefulness that has great possibilities and one in which the American Road Builders' Association should take a very active part. This association, as a serious business organization representative of the highway industry, by close and helpful co-operation with other highway organizations, can expand its usefulness and be a large factor in co-ordinating highway transportation interests, not only in the United States but in the Western Hemisphere.

The program that has been arranged for the meetings at the convention to be held in Chicago the week of January 11 will bring out many important serious discussions relating to the highway business. The annual banquet must also be a serious part of the business of the association. Associations representing the different industries are judged very largely by the meetings and annual banquets at the conventions. At the American Road Builders' meetings and banquet this year addresses will be made that will be of very considerable importance to all those who are interested in furthering and co-ordinating the activities of the highway business.

Contracts Shortly to Be Awarded on \$2,000,000 Bridge Over Mobile Bay.

Mobile, Ala.—Contracts will be let this month for the \$2,000,000 bridge to be erected across Mobile Bay—excepting the earthwork, embankments, dredging and pavement—by the Mobile Bridge Co., of which John T. Cochrane is president.

The entire project includes: A bridge over the Mobile River, comprising four through riveted truss spans, one 175-foot, two 225-foot and one vertical lift span 320 feet long, with piers of concrete supported by wooden piles; a bridge over the Tensaw-Spanish River, comprising five through truss spans, each 200 feet long, one of which shall be a vertical-lift span, with piers of concrete supported on wooden piles; a bridge over the Apalachee River, 1400 feet long, and a bridge over the Blakely River, 1100 feet long. These bridges and portions of the structure adjacent to the Mobile River bridge and the Tensaw-Spanish River bridge and over the Louisville & Nashville Railroad will be of steel girded beam and concrete pile trestles, constructed of precast concrete piles. The structures throughout will provide a 20-foot roadway for highway traffic on a reinforced floor slab. The Mobile River bridge will include about 1200 tons of superstructure metalwork, 840 cubic yards of superstructure concrete and 4500 cubic yards of substructure. In the Tensaw-Spanish River bridge there will be 940 tons of superstructure metalwork, 700 cubic yards of superstructure concrete and 4400 cubic yards of substructure. The girder beam and concrete pile trestle construction will require 750 tons of super-

structure metalwork, 2800 cubic yards of superstructure concrete and 2300 lineal feet of reinforced concrete piles.

Harrington, Howard & Ash, consulting engineers, of Kansas City made a survey and an estimate on the cost of the structure, which was endorsed by Ford, Bacon & Davis of New York city. The Mobile Bay Bridge Co. has a contract with Mobile county and Baldwin county, which has been approved by the Alabama Public Service Commission, providing that the bridge shall be operated by the Board of Revenue and Road Commissioners of Mobile County, the county paying all operating costs and repairs, except replacements, out of its general fund. The gross amount of tolls collected will be paid to the bridge company as rental, and will be applied, after payment of taxes, insurance, interest and other necessary expenditures, to the retirement of the bonds. There is a total authorized bond issue of \$2,700,000.

Bids for this big project were received on January 4 after plans and specifications by Harrington, Howard & Ash.

To Sell Road Bonds.

Raleigh, N. C.—A bond issue of \$1,300,000 will be offered for sale by Wake County Commissioners on January 15; a day after the city of Raleigh will offer an issue of \$1,400,000. Proceeds from the county bonds will be loaned to the State Highway Commission for building roads in the county.

Southern Road Development by States

\$8,900,000 Program Under Way in Alabama.

By L. M. DINSMORE, State Highway Department of Alabama.

The state roads system of Alabama includes approximately 400 miles of highways. On January 1 the State Highway Department had completed 1650 miles of road and about 42,000 lineal feet of bridges at a total cost of \$23,400,000.



THE PEA RIVER BRIDGE IN ALABAMA.

At that time it had under construction 700 miles of roads of various types and 24,000 lineal feet of bridges, the total valuation being \$8,900,000. At the end of the preceding year the highway department had completed about 850 miles of road,



BITUMINOUS MACADAM ROAD, WITH STONE BASE.

and there were then under construction something like 650 miles.

There is now under state maintenance a system totaling 1700 miles of roads. The types of roads under construction and completed are cement, asphalt, concrete, gravel and sand-clay. Bridges now building and completed recently are of concrete, structural steel and creosoted timber.

At Decatur, over the Tennessee River, a concrete arch bridge is under construction. At Gadsden, over the Coosa River, a similar structure is being built. The approximate cost of these two bridges is \$1,000,000.

The program for this year provides for the construction of 600 miles of road, with necessary bridges, estimated to involve the expenditure of \$8,000,000.

The State Highway Department was created by an act of the legislature in 1911, and consisted of five members and a state engineer. An educational campaign in the interest of

good roads resulted in the approval in 1921 of a bond issue of \$25,000,000, but these bonds were later declared unconstitutional. The proposition was again ratified in 1923.



BRIDGE OVER CANOE CREEK.

Approximately \$12,000,000 will be put into roads in 1925 and 1926, and this expenditure will practically exhaust all of the state bond issue.



BITUMINOUS CONCRETE CRUSHED STONE BASE.

24 Miles in Alabama to Cost \$304,000.

Montgomery, Ala.—Contracts for the construction of three road projects aggregating more than 24 miles have been awarded by the Alabama State Highway Commission at a figure in excess of \$304,000. For building 9.32 miles in Morgan county, between Decatur and Moulton, J. W. Gwin of Birmingham was awarded contract at \$228,614. Surfacing for this project will be either penetration macadam or rock asphalt. Nixon & Phillips of Lineville, Ala., were awarded contract at \$35,955 for building 8.6 miles of gravel road between Greenville and Pineapple in Butler county, and at \$39,955 for 6.3 miles of gravel between Ashland and Lineville in Clay county. The next meeting of the commission will be held on January 12.

Greenville, Ga.—A call for an election on January 13 on a bond issue for the construction of roads in Meriwether county has been issued by the County Commissioners. Plans provide for paving all state-aid roads in the county, a total of approximately 52 miles.

Arkansas Spends \$8,200,000 for New Roads and Maintenance in 1925.

By R. C. LEMERICK, State Highway Engineer.

In 1925 Arkansas road development, under the new road law, has kept steady pace with the general progress of the state as a whole, and with only comparatively small amounts of funds many miles of improved highways have been added to the state highway system.

Among the important developments of the year have been



IN EASTERN ARKANSAS—MODERN HIGHWAY LEADING SOUTH FROM HELENA.

the completing of many projects which had been in the course of construction for from three to six years, the enlarging of the original state highway system of 6700 miles by the addition of 1600 miles in order more nearly to serve perfectly the general interests of the through and local traffic, the working out of a complete marking and signing system for the state highway system, and the perfection of



VIEW ON LITTLE ROCK-HOT SPRINGS HIGHWAY, COMPLETED IN 1925.

a more efficient highway department organization, capable of handling the many demands of the maintenance and construction of a large highway system.

During the year \$8,200,000 has been expended on the maintenance and construction of state highways, and with these funds 144 miles of pavements and approximately 700 miles of gravel, chert and shale roads have been built. There is under construction at present 555 miles of all types of roads, and during the year 1926 it is expected that the total expenditures on the state highway system for main-



TYPICAL EXAMPLE OF GRAVEL ROAD CONSTRUCTION IN ARKANSAS.

tenance and construction of roads and bridges will total between \$6,500,000 and \$7,000,000.

The table below shows the progress made in developing the Arkansas State Highway system to December 1, 1925:

Types	Original state highway system	Mileage added in July 1925	Totals
Pavements, asphalt and concrete.	655	60	715
Gravel, macadam, chert and shale	2770	310	3080
Improved graded	1585	230	1815
Unimproved	1130	990	2120
Under construction	560	10	570
Totals	6700	1600	8300

The 1926 road program will be marked by the small amount of paving work done, the large amount of gravel road mileage undertaken, the development of a large part of the unimproved mileage into well-graded roads, and the construction of several large important bridges, one over the Arkansas River, one over the White River and two over the St. Francis River.

Bids on Two Bridges Total \$1,075,000.

Raleigh, N. C.—Low estimates submitted to the State Highway Commission for the construction of the new bridge across the Lower Chowan River and for the Morehead-Beaufort bridge across Bogue Sound and Newport River total approximately \$1,075,000. The Chowan River bridge, to connect Edenton and Windsor, will be 7905 feet long and 20 feet wide. It will consist of a creosoted timber superstructure on reinforced concrete piles and will contain a 200-foot draw span electrically operated. The roadway will have an asphaltic wearing surface. The Sanford-Brooks Co. of Baltimore, with offices at Charleston, S. C., submitted low bid on this bridge at \$432,422.

The same firm submitted low bid for the substructure of the proposed Morehead-Beaufort bridge at \$504,076, while the Roanoke Iron & Bridge Co. of Roanoke, Va., was lowest on the superstructure at \$138,450. This bridge will be in two

sections, one spanning Newport River, near Morehead City, and the other over Bogue Sound, near Beaufort. There will be a mile fill between the two sections, the Newport River section to be about 2664 feet long and the Bogue Sound section 482 feet. Both spans will be of the bascule type, 90 and 75 feet, respectively.

Florida County to Vote on \$700,000 Bonds.

Fort Myers, Fla.—January 19 has been fixed by the Lee County Commissioners as the date of an election on a bond issue of \$700,000 for the construction of roads and bridges in the Fort Myers-Iona road and bridge district. Projects listed include a \$100,000 concrete bridge to Estero Island at Matanzas Pass, widening and paving McGregor boulevard from Fort Myers to Punta Rassa, paving a link to connect McGregor boulevard with Tamiami Trail, and building two-mile road on Estero Island.

Florida Builds 380 Miles—Has \$10,000,000 Available for Construction in Next Twelve Months.

By L. K. CANNON, Assistant State Highway Engineer.

The Florida State Road Department is among the highway departments of the South which have adopted, and are adhering to, the pay-as-you-go plan. The state has no bonded indebtedness for the construction of highways. The funds are derived as follows: Automobile registration; state road tax, one mill; gasoline inspection; gasoline tax; automobile license tax and Federal aid. The 1925 legislature authorized a tax of 4 cents a gallon on gasoline, 3 cents of which is turned over to the State Road Department and 1 cent prorated to the several counties. From these sources the department anticipates approximately \$10,000,000 for the coming year.

The legislature increased the state system of roads, and at the present time it embraces 5654 miles. The legislature also

for 315 miles of road and 5419 linear feet of bridges at a contract cost of \$5,017,711. In addition there are employed under the control of the department the state convicts, numbering approximately 800. These are divided into camps and



8-INCH LIME ROCK BASE, SURFACE TREATED, IN BRADFORD COUNTY, FLORIDA.



POPE LAKE BRIDGE IN JACKSON COUNTY, FLORIDA. CREOSOTED TIMBER, SURFACE TREATED.

equipped. They are used principally in clearing, grubbing and grading, and sand clay construction. This system allows the grading to be completed and settled before the surface is contracted for.

During the year 1925, there has been built by the State Road Department 26 miles of concrete, 10.5 miles bituminous concrete, 30 miles of sheet asphalt, 110 miles of surface-treated rock base, 70 miles of sand-clay surface and 65 miles



SAND-CLAY SURFACE IN HOLMES COUNTY, FLORIDA. PAGE GUARD RAIL.

of road graded ready for surface. This mileage includes all the small drainage structures incident to the construction.

The state's program for 1926 will be to complete the work now under construction and to continue its work of completing the through highways, arranging its budget to be carried with approximately \$10,000,000.

The State Road Department awarded contracts in 1925



3-INCH BITUMINOUS MACADAM ON 8-INCH ROCK BASE IN NASSAU COUNTY, FLA.



A CONCRETE ROAD IN ESCAMBIA COUNTY, FLA.



SHEET ASPHALT ON 8-INCH ROCK BASE IN ORANGE COUNTY.

\$7,000,000 for Georgia Highways Last Year—375 Miles Completed.

By W. R. NEEL, State Highway Engineer.

A considerable increase in the mileage of completed roads on the state highway system of Georgia will be noted for the year 1925, as shown in the tables following. The work did a great deal toward connecting up what were heretofore isolated projects into a continuous good road. One outstand-

ing engineering problems. In connection with this comes the completion of the Savannah River crossing above Savannah. This project was built by Georgia and South Carolina and consists of six concrete bridges and 4.83 miles of gravel-surfaced causeway built across the marshes of the Savannah River, across the dykes and levees of the old pre-Civil War rice plantations.



SECTION OF CONCRETE ROAD ON ATLANTA-MACON HIGHWAY.

ing example of this is the completion of an 8.3-mile stretch of concrete pavement in Coweta county. This project gave a paved highway all the way from Moreland, Ga., through Atlanta to Marietta, Ga., or a total continuous stretch of 65.5 miles of paved road.

Another outstanding feature of road development occurs in the extreme eastern part of the state, where the construc-



CONSTRUCTION ACROSS THE MARSHES OF ATLANTIC COAST ON THE COASTAL HIGHWAY.

tion of the Coastal Highway from Savannah via Brunswick to Jacksonville, Fla., is going forward. This road will serve a community which heretofore has not had the great advantages of modern roads. This highway is located along the Atlantic Coast line, and location of this road brought on many inter-



WATERBOUND MACADAM IN UNION AND LUMPKIN COUNTIES, GEORGIA—NOW SURFACE TREATED.



VIEW FROM HIGHEST POINT ON A HIGHWAY IN GEORGIA, IN LUMPKIN AND UNION COUNTIES.

TABLE NO. 1.
PROJECTS COMPLETED IN 1925.

Type.	Mileage.	Cost.
Graded	25.750	\$111,877.11
Topsoil	133.875	1,040,356.11
Waterbound macadam.....	4.820	126,971.41
Gravel and chert.....	112.590	1,429,734.94
Bituminous macadam.....	16.510	454,800.55
Asphalt	7.663	245,621.15
Surface treated.....	17.920	71,976.31
Concrete	56.092	1,613,885.57
Total.....	375.220	\$5,095,223.15

BRIDGES.

Type.	Length in feet.	Cost.
Concrete	12,398	\$1,141,772.98
Timber	10,044	761,376.68
Total.....	22,442	\$1,903,149.66
Grand total		\$6,998,372.81

TABLE NO. 2.

WORK ON UNCOMPLETED PROJECTS IN 1925.

Type.	Mileage.	Cost.
Graded	126.527	\$524,204.31
Topsoil	276.494	742,648.09
Waterbound macadam.....	8.800	70,590.47
Gravel and chert.....	103.720	459,507.03
Bituminous macadam.....	19.700	178,585.24
Surface treated.....	84.054	*331,858.92
Concrete	30.164	524,204.31
Total.....	649.450	\$2,831,508.37

BRIDGES.

Type.	Length in feet.	Cost.
Concrete	4,707	\$375,073.98
Timber	7,913	124,116.27
Total.....	12,620	\$499,190.25
Grand total.....		\$3,330,788.62

*This surface treatment is on waterbound macadam (48.850 miles) and gravel and chert roads (35.204 miles), and this amount of work shown includes the cost of the base course on the waterbound macadam roads.

†The cost shown here represents only the amount of work done on the projects in the year 1925.

‡This mileage represents the total mileage under construction and not the percentage of the project completed in 1925.

TABLE NO. 3.

PROPOSED WORK FOR 1926.

Type.	Approx. Mileage.	Approx. Cost.
Graded and drained.....	60.0	\$240,000
Topsoil	100.0	650,000
Gravel and chert.....	45.0	616,000
Waterbound macadam.....	22.0	275,000
Surface treated.....	83.5	376,250
Asphalt	33.0	600,000
Concrete	85.0	1,870,000
Pavements (type undetermined).....	13.5	337,500
Total.....	442.0	\$5,024,750
Bridges		600,000
Grand total.....		\$5,624,750



MAIN BRIDGE OVER THE SAVANNAH RIVER CROSSING
ABOVE SAVANNAH, GA.

The newly constructed road in the northern and mountain region of the state opens up still another section which has heretofore found it practically impossible to carry on transportation over the highways and a section, too, that is served by few railroads. This section is rich in both scenic and industrial possibilities, and its opening up gives great promise to the entire state.

In the year 1926 it is planned to pave the remaining links in the Atlanta-Macon Highway, which will give a continuous stretch of pavement from Atlanta to Macon and Echeconnee of 103 miles, and from Atlanta to Marietta, 20 miles, or a total paved expanse of 123 miles.

Several important interstate bridges were either started or completed during the year, among them being a crossing



INTERSTATE BRIDGE BETWEEN GEORGIA AND ALABAMA
AT FORT GAINES, GA.

of the Chattahoochee River at Fort Gaines, Ga., and another between Georgetown, Ga., and Eufaula, Ala.; two over the Savannah River, one at Savannah and another at Augusta, these being completed in 1925. A crossing of the St. Mary's River between Kingsland, Ga., and Jacksonville, Fla., was also started, and plans are being made for two additional bridges over the Savannah River between Georgia and South Carolina, one near Hartwell and the other near Elberton.

There has been quite a lot of activity on the part of different counties in the state this year toward county bond issues for good roads. To date eleven counties have voted bonds in the total amount of \$5,300,000 and several more counties will vote on bond issues within the next few months. This gives promise of great activity in highway construction in Georgia for the next few years.

Kentucky Roads Cost \$7,800,000 for 380 Miles of Various Types in 1925—Similar Expenditure for 1926.

By E. N. Todd, State Highway Engineer, Kentucky State Highway Commission.

The State Highway Department of Kentucky has built during the year 1925 47 miles of cement concrete paving at a cost of approximately \$34,000 per mile, 5 miles of native rock asphalt at \$41,000 per mile, 78 miles of waterbound macadam at \$26,000 per mile, 75 miles of gravel at \$17,800 per mile, 175 miles of grade and drain at \$14,700 per mile—a total of 380 miles at approximately \$7,800,000.

The construction program for the calendar year 1926 will include possibly a like expenditure of money, but a less amount will be expended for high-type paving in 1926 than has been expended in 1925; however, the large mileage of

miles of bituminous macadam, 887 miles of bituminous surface-treated macadam, 81 miles of waterbound macadam and 487 miles of gravel. Besides these surfaced roads being maintained, 369 miles of earth road, constructed to modern stand-



A BRIDGE IN EASTERN KENTUCKY NEAR PIKEVILLE.



NEW CONCRETE HIGHWAY, KNOX COUNTY.

ards, is maintained in good condition for nine months of the year. Approximately \$1,500,000 a year is being used by the maintenance division. This state has a big mileage of surface-treated macadam maintained in excellent condition, serving practically the purpose of high-type paving, though the expenditure for maintenance in some cases is not economical.

The department has in recent years had its revenue for road construction very greatly increased by the 3-cent gas tax, and now has revenue sufficient to make good progress, though the demands for the expenditures of funds are great. This state is unfortunate in comparison with most of its neighbors in that the same amount of funds will not accomplish the

grade and drain projects will ultimately be surfaced with medium or high-type paving.

In the state road system of the state there are approximately 8000 miles, but only that portion of the state system is being maintained by state funds that has been brought up to a required standard. The State Department is now maintaining 113 miles of cement concrete, 14 miles of bituminous concrete, 4 miles of brick, 147 miles of rock asphalt, 75

same amount of construction as in the states where the topography is more favorable. A comparatively small number of miles have been surfaced in the eastern portion of Ken-



CONCRETE ROAD NEAR LOUISVILLE.

tucky, and where grade and drain projects have been constructed the cost has been greater than most states are required to pay for surfaced roads. We not only have the

rugged mountains to contend with, but most of our heavy cuts are made through solid rock.

During the year 1925, in addition to the construction of short sections of roads in co-operation with funds furnished by counties, the department has been able to close a number of gaps in the important roads crossing the state. Kentucky's roads are being widely advertised just now as the shorter routes for the Southern travel. Three hard-surfaced roads are open crossing the state—one from Covington, opposite Cincinnati, through Lexington and Middlesboro to Cumberland Gap; another from Louisville through Bowling Green to the Tennessee line, and a third from Henderson, opposite Evansville, Ind., through Hopkinsville to the Tennessee line. These three routes are carrying an enormous out-of-state traffic this season.

In addition to these north and south routes, beginning at Ashland and extending through the northeastern mountain section, through Lexington and the Bluegrass to Louisville and down the Ohio River through Owensboro and Paducah to the Mississippi River, a distance of 590 miles, splendid progress has been made. More than 100 miles of high-type paving has been completed between Ashland and Louisville and only a short gap in this section is left to be surfaced.

Louisiana Road Contracts Totaled \$6,700,000 Last Year.

By A. G. Cook, Editor, Louisiana Highway Magazine.

The outstanding project among the 100 or more inaugurated last year by the Louisiana Highway Commission is, perhaps, the Hammond-New Orleans highway, which practically parallels the tracks of the Illinois Central Railroad from the Mississippi state line to within a short distance of New Orleans. Many unique features and unusual engineering problems are involved as it passes through extensive swamps and along the shores of Lake Pontchartrain, where difficulty is experienced in securing a foundation upon which to build an enduring highway. It will probably cost \$100,000 a mile for certain sections. The big drawbridge at Pass Manchac is under construction and when completed will be the longest highway bridge in Louisiana. The embankment and timber bridges on the Hammond-New Orleans highway have been practically completed, and work on the entire project will be undertaken shortly and carried forward to completion.

The present Louisiana Highway Commission, which took office October 1, 1924, has only recently finished its first year's activities. The past 12 months constitute the banner year in actual accomplishments in highway construction and maintenance in the history of road building in Louisiana.



JEFFERSON HIGHWAY—THE Y INTERSECTION ON THE ROAD TO BEGG, ST. LANDRY PARISH, LA.

It is noteworthy that the maximum year's activities in construction work occurred immediately after the passage of Act No. 142 of the Louisiana Legislature, session of 1924, which set aside all revenues received from the two-cent gasoline tax for maintenance purposes, whereas formerly the funds from

this source were available for construction as well as for maintenance.

Some of the achievements of the Highway Commission during the past 12 months in completing broken links, thus connecting up the state's highway system, may be given as follows:

It has completed the highway between Natchitoches and Sareveport along the west side of Red River, thus providing a shorter route by 35 miles than the Jefferson highway, between New Orleans and Sreveport. It has completed two sections of the highway, connecting southwestern Louisiana and southeastern Louisiana; one section between Lebeau and Beggs, and the other near Carencro, reducing the route by more than 40 miles. It has placed under construction the last and most difficult links at both ends of the Old Spanish Trail, which crosses the southern part of the state, including bridges across East and West Pearl rivers, and the widening of the Chef-Menteur-Rigolets highway on the east end and the very expensive bridge and embankment work in the Sabine River marsh on the west end. When these projects are complete and the bridge across the Sabine River is con-



DIXIE-CLEVELAND HIGHWAY, LINCOLN PARISH, THREE MILES WEST OF RUSTON, LA.

structed by the state of Texas under an existing agreement, this will be a good all-year highway from the Mississippi line on the east to the Texas line on the west.

Work is under way on the last sections in the Lone Star Route highway, between Lake Charles and the Arkansas

state line, northeast of Bastrop. The remaining portion in the direct north and south route between Lake Charles and Shreveport, which touches the towns of De Ridder, Leesville, Many and Mansfield, is now being built. The entire highway from Leesville to Natchitoches by the way of Kurthwood and Provencal has either been let to contract or completed. The route between Leesville and Natchitoches will soon be open for traffic.

All sections of the highway following an easterly direction from St. Francisville to Franklinton by way of Clinton, Greensburg and Amite City have either been completed or are now under way, and the same is true of the section of highway between Alexandria and the Arkansas State line at Junction City, touching the towns of Bently, Packton, Winfield, Jonesboro, Ruston and Bernice. Practically all of that part of route No. 57 between Alexandria and Marksville, which when finished will afford another traffic artery between Alexandria and Baton Rouge, is under construction or completed. The last section in the highway leading directly from Thibodaux to Morgan City—between Chacahoula and Donner—is now being built. The highway between Brule and Chacahoula has been finished.

The highway between Gonzales and Burnside in Ascension parish, which will shorten the Jefferson highway eight miles between Baton Rouge and New Orleans, is about complete.



SHREVEPORT-TEXARKANA BRIDGE OVER CROSS BAYOU, LOOKING TOWARD SHREVEPORT.

Work is under way on the last section of the Dixie Overland highway, between Minden and Shreveport. Three high-type paving projects, two in East Baton Rouge parish and one in Ouachita parish, have been finished. There have also been placed under construction, completed and advertised numerous other sections of highways which in themselves do not complete any route. Likewise surveys have been made of several hundred miles of highways not yet advertised.

During the past 12 months, ending October 1, 1925, the commission advertised and placed under construction 101 highway projects and 27 bridge projects to cost \$6,700,000, the road mileage totaling 616. During the preceding 12 months a total of 87 projects, covering 440 miles of highways, were advertised and placed under construction. The commission has also completed and accepted 601 miles of highway, costing \$6,200,000; has advertised for bids for 102 miles to cost \$2,000,000, and has surveyed and is making ready for advertising about 450 miles to cost \$5,500,000. In addition, the commission has kept over 500 miles of highways under construction and has maintained an average of about 3700 miles of constructed highways. Thus the beginning of the second year of the commission's life finds it with nearly 4000 miles of completed highways, which, together with that being completed, must be maintained up to standard.

It is of importance to note that many parishes (counties)

are applying for state and Federal aid for construction of higher-type surfaced roads than gravel. In order to meet the demand upon it the commission is constructing an experimental road on the Baton Rouge-Hammond highway in East Baton Rouge parish; it is hoped this will throw much light on how best to meet the problem. It is already evident that the coming year will see the greatest mileage of high-type highway construction work that has ever been attempted.

Work will begin on hundreds of miles of important high-



A NEW STRETCH BETWEEN BATON ROUGE AND SCOTLAND LA.

ways in the year 1926. In 1924 approximately \$7,000,000 was spent in Louisiana for constructing and maintaining highways. For 1925 the sum will be approximately \$9,000,000.

Plans are being discussed whereby the highway from Baton Rouge to New Orleans may be paved the entire distance at a cost of \$40,000 a mile. It is proposed to eliminate many, if not all, the curves in the highway to New Orleans, thus shortening the distance about 20 miles, and to pave the road the entire distance.

At present the parish of East Baton Rouge and the commission are providing for hard-surfacing the section of the road in East Baton Rouge parish from Baton Rouge to Hope Villa, 15 miles. Jefferson parish, adjoining Orleans parish,



MONROE-SICARD HIGHWAY, SHOWING CURVE AND GUARD RAIL.

is to hard-surface the highway within its confines, beginning at Kenner and extending to the Orleans line. When these two projects are completed, 55 miles of additional hard-surfacing will be needed to connect the two cities.

From these facts it will be seen that Louisiana is going ahead in improved highway construction. The highways are connected and continuous, making it possible for motorists to travel for hundreds of miles in almost any direction within the state on a graveled or paved highway without encountering stretches of dirt road or impassable mud holes. The highways connect the "courthouse towns" and practically all commercial centers, covering the state thoroughly, although only a little more than one-half the state system is completed.

\$6,400,000 Spent on Maryland Roads Last Year—Large Sum Available for 1926.

By JOHN M. MACKALL, Chairman and Chief Engineer, State Roads Commission, Baltimore.

In 1925 Maryland spent for maintenance and reconstruction \$3,531,251. There are in Maryland's maintenance system 916 miles of concrete roads, 1022 miles of surface-treated macadam, 423 miles of surface-treated gravel and 68 miles of sheet asphalt roads, making a total of 2429 miles.

During 1925 there was expended for construction \$2,950,000, of which 25 per cent was derived from the Federal Government as Federal aid, 25 per cent from the counties and 50 per cent from the state. This sum constructed 120 miles of concrete roads, 18 miles of macadam, 40 miles of gravel and

construction of concrete shoulders. Maryland has many miles of macadam road 14 feet in width, which are located on the main lines and which are carrying a traffic of from 2500 to 3000 vehicles per 24-hour day. A concrete shoulder 3 feet wide is constructed on either side of these roads, which widens the road to 20 feet, and has a still greater advantage in that it renders the maintenance on the old macadam road comparatively simple and inexpensive. The construction of these concrete shoulders costs about \$14,000 per mile in comparison with a cost of \$40,000 per mile for a new road



BRIDGE OVER GUNPOWDER RIVER ON BALTIMORE-PHILADELPHIA ROAD.

5 miles of asphalt roads, and also out of this fund 11 one-way bridges were replaced with modern reinforced concrete arch structures, and grade crossings at the following points were eliminated: Silver Spring, Stepney, Oldtown and Oakland. In addition to this concrete shoulders were placed, out of reconstruction funds, on 101 miles of old macadam roads.

For 1926 there will be expended \$2,640,000 for construction, which will be used, as last year, for concrete, macadam and



ELIMINATION OF GRADE CROSSING, BALTIMORE & OHIO RAILROAD AT STEPNEY, MD.

of the same width. The experience during a period of eight years with concrete shoulders demonstrates that they are thoroughly practical in every respect, and a large mileage will be constructed each year.

Among other features of road service which the Commission has accomplished this year probably the most conspicuous is the uniform marking of all danger points on the entire state road system with a reflector type warning signal, which is effective both day and night.



NATIONAL PIKE NEAR FREDERICK, MD., SHOWING CONCRETE SHOULDERS.

gravel surface, depending upon the location and importance of the road. There will be expended in the same period \$3,670,000 for maintenance and reconstruction. This fund will be derived from the registration fee on motor vehicles and by a tax of 2 cents per gallon on motor fuels. This fund will be sufficient to permit the construction of about 100 miles of concrete shoulder.

No road work in Maryland is considered by the State Roads Commission, or by the public at large, as of greater importance than the widening of old macadam roads by the

Hillsborough County to Sell \$3,605,000 Bonds.

Tampa, Fla.—Arrangements have been made by Hillsborough County Commissioners to receive bids in January and February for road and bridge bonds to the amount of \$3,605,000. The first to be offered is an issue of \$80,000 of Palm River special road and bridge district, funds from the sale to be used for building five miles of road east from the mouth of Palm River.

On January 22 an issue of \$1,000,000 of Northeast Tampa special road and bridge district bonds will be offered, proceeds from the sale to be used for paying a number of roads in Temple Crest subdivision and adjacent territory; on January 29 the board will offer \$1,100,000 of district No. 4 bonds for building approximately 70 miles of road. This program will embrace a lateral system to the present highways in and around Plant City. On the same date bids will also be received for the purchase of an issue of \$75,000 voted by residents of Twenty-second Street special road and bridge district for paying on Osborn avenue and a portion of 22d street.

Bids will be received on February 5 for the purchase of an issue of \$1,350,000 of special road and bridge district No. 5 bonds, proceeds from which will be used to inaugurate a road-building program in the southeastern part of the country.

Mississippi Completes Over 200 Miles, Costing \$3,650,000.

By D. G. DENHAM, Office Engineer.

During the year 1925 the Mississippi State Highway Department gave final completion and acceptance to 31 miles of graded and drained road, 160 miles of graded, drained and gravel-surfaced road, and 16.5 miles of graded, drained and paved road. In addition to this we completed two sep-



BRIDGE OVER YAZOO RIVER, GREENWOOD, MISS.

arate bridges, besides the bridges that were included in the road projects.

Our work under construction at this time is as follows: 75 miles of graded and drained road; 250 miles of graded, drained and gravel-surfaced road; 60 miles of graded,



CONCRETE UNDERPASS EAST OF JACKSON, MISS.

drained and paved road; 3 separate bridges in addition to those included in the road projects.

Two Roads Through Mountain Reserve.

Nashville, Tenn.—Plans have been announced by C. N. Bass, acting state highway engineer, for the construction of two highways through the reserve for the proposed Great Smoky Mountain National Park. It is stated that surveys will be started within a few days and construction will begin by August. One of the roads, a scenic highway, will form a connection between Gatlinburg and Bryson City through Indian Gap, traversing the center of the proposed park. Sevier county has voted \$100,000 for its construction, which will be matched with funds from the state highway department.

The other connection will be a commercial highway extending to southwestern North Carolina from Maryville and Knoxville. It is expected that Blount county will co-operate in the construction of this road.

Will Issue \$396,000 of Bonds.

Sarasota, Fla.—Resolutions calling for an issue of highway improvement bonds to the amount of \$396,000 have been passed by the Sarasota County Commissioners. Work for

Our expenditures during the year 1925 total approximately \$3,650,000. This, of course, applies to completed projects as well as to those under construction, and does not cover the entire cost, due to the fact that some of this work was carried over from the year 1924.

We are planning to begin construction during the next year of 60 miles of graded and drained road, to cost approximately \$800,000; 80 miles of graded, drained and gravel-surfaced road to cost \$1,300,000; 15 miles of paving only, to cost \$300,000, and 12 miles of grading, draining and paving,



BRIDGE OVER PEARL RIVER AT JACKSON.

to cost \$400,000. In addition to these road projects, we expect to start the construction of two separate bridge projects, one to be over the Yazoo River north of Vicksburg, and to cost approximately \$350,000, and the other to be over the Bay of St. Louis at Bay St. Louis, Miss., to cost approximately \$650,000.

No unusually difficult engineering features have been encountered and our most interesting construction has been the major bridge structures. One of the bridges completed in 1925, that over the Pearl River near Jackson, is of unusual interest in that the three-hinge type of concrete arch construction was adopted and the foundation consists of a large number of piles driven in a very hard clay formation. The other major bridge completed last year was a steel swing span, with concrete approaches, over the Yazoo River at Greenwood.

which the bonds are intended embraces the widening of the Tamiami Trail from 18 to 30 feet from the county line to the present city limits of Sarasota, on Broadway at Hog Creek, to cost \$135,000; paving the 18th street-East avenue project, \$81,000, and for the Victory avenue loop extension, \$180,000.

For Bridge Across Potomac River.

Richmond, Va.—Articles of incorporation have been secured from the State Corporation Commission for the George Washington-Wakefield Memorial Bridge, capitalized at \$50,000, for the construction of a bridge over the Potomac River in King George county. Channing M. Ward of Richmond is president and William R. Ward of Warsaw, Va., secretary. Others interested in the project include Joseph B. Strauss and P. L. Kauffman of Chicago, Wat T. Mayo, Hague, Va., and George Mason, Colonial Beach, Va.

Turner county, J. N. Raines, clerk, Ashburn, Ga., will vote January 16 on a bond issue of \$125,000 for paving the national highway through the county and to build bridges on other roads.

\$86,000,000 for Three-Year Program in Missouri—\$35,000,000 of This Total Now Under Construction.

By B. H. PIEPMEIER, Chief Engineer, Missouri State Highway Commission.

During the past three years the State Highway Department has contracted for \$86,000,000 worth of state road work, and it now has under contract approximately \$35,000,000 of such work. The department has sold \$40,000,000 of the \$60,000,000 bonds available for road work in Missouri.

Missouri has a state road system of 7640 miles, of which 2500 miles have been finished. During 1925 1000 miles were hard-surfaced, principally with concrete or gravel; during 1926 approximately 1000 miles more will be finished, using concrete or gravel.

The Kansas City-St. Louis road, Route No. 2, is now hard-surfaced. This entire route is paved with concrete, with the

The aggregate cost of the four bridges was \$3,022,781. In addition to these four large bridges, the department built 246 other structures during 1925 at a cost of \$2,009,214. The



DIVERSION CHANNEL BRIDGE IN CAPE GIRARDEAU COUNTY, MISSOURI.

exception of 40 miles of old gravel, which will be replaced with concrete during 1926. Several very important cross-state highways will be surfaced in 1926, so that they may be traveled any day in the year.

The State Highway Commission maintains the policy of first building the bad portions of the state system. This policy distributes state road work in all parts of Missouri and causes a large number of detours, but seems to best serve the traveling public and the state as a whole.

The State Highway Commission is maintaining all of the state roads, a total of 7640 miles, regardless of whether or not they have been improved. This policy conserves the investments that have been made in road improvements and makes the unimproved roads more serviceable to the traveling public. All temporary detours around construction work are also maintained, but at times some detours and portions of the state roads become impassable. In such instances the department provides a team, without cost to the motorist, to aid him in getting over the bad places.

The last of the four bridges recently built across the Missouri River by the department was dedicated in November.



MISSOURI PROJECT No. 217—LOOKING WEST BETWEEN HIGHWAY AND RAILROAD BRIDGE.

total length of all bridges built to date is 13.5 miles. The total length of bridges built in 1925 is 5 miles.

Approximately 600,000 automobiles and trucks were registered in this state during 1925. The funds derived from automobile registration fees amounted to approximately \$8,000,000. In addition to this, a gasoline tax of two cents



A GRAVEL ROAD IN MISSOURI.

a gallon was imposed during 1925, which added about \$5,000,000 to the state road funds. The automobile registration fee and the gas tax are used exclusively for retirement of road bonds, road construction and maintenance.



IN JASPER COUNTY, MISSOURI.



A ST. LOUIS COUNTY HIGHWAY.



BRIDGE OVER CURRENT RIVER.

North Carolina Completes \$27,800,000 in Road Work in Past Twelve Months—\$12,000,000 for New Construction in 1926.

By H. K. WITHERSPOON, Assistant to Chairman, State Highway Commission, Raleigh.

A large mileage of roads was completed in North Carolina during 1925, as will be seen by the following figures. During 1926 approximately \$12,000,000 will be expended in new construction, which will provide for approximately 200 miles of paved roads and 500 miles of the lower types. An additional bond issue of \$20,000,000 was authorized by the

last General Assembly, making the total bond issue for road building \$85,000,000. All maintenance is taken care of by revenue from gasoline tax and from automobile licenses.

WORK COMPLETED TO JANUARY 1, 1926.

	Miles	Cost
Cement concrete	813.66	\$27,813,815
Asphaltic concrete	557.82	18,222,057
Sand asphalt	165.07	2,778,803
Penetration macadam	286.71	6,072,818
Brick	9.50	233,180
Sand clay and topsoil	1,465.53	13,587,378
Gravel	360.01	3,521,231
Graded	789.74	6,812,890
Total	4,448.04	\$79,042,172
Bridges		3,158,781
Grand total		\$82,200,953

PROJECTS COMPLETED DURING 1925.

	Miles	Cost
Cement concrete	319.45	\$10,450,033
Asphaltic concrete	130.60	4,352,460
Sand asphalt	107.13	1,893,193
Penetration macadam	109.40	2,226,728
Sand clay and topsoil	276.40	2,431,532
Gravel	96.85	1,024,542
Graded	505.04	3,898,363
Total	1,544.87	26,276,851
Bridges		1,550,205
Grand total		\$27,827,056



BUILDING BRIDGE OVER CAPE FEAR RIVER.

WORK UNDER CONTRACT AND CONSTRUCTION JAN. 1, 1926.

	Miles	Cost
Cement concrete	269.04	\$7,604,642
Asphaltic concrete	123.62	3,191,873
Sand asphalt	15.33	303,140
Sand clay and topsoil	90.28	763,490
Gravel	7.84	110,770
Graded	310.43	2,685,617
Total	816.54	\$14,659,532



SAND ASPHALT IN EASTERN NORTH CAROLINA.



WASHINGTON TO FLORIDA HIGHWAY.



A SAFE CROSSING IN NORTH CAROLINA.

To Lend State \$200,000 for Two Roads.

Elizabeth City, N. C.—A \$200,000 bond issue has been authorized by Currituck County Commissioners to partially finance the construction of two roads in the county. This issue will constitute a loan to the State Highway Commission, which plans to build a concrete road from Elizabeth City to Currituck Courthouse and one to the Virginia line. It is estimated that the two roads will cost \$275,000.

Alabama Wants Bids on 14 Miles.

Seale, Ala.—Proposals will be received until February 10 by the State Highway Commission, at its office in Montgomery, for the construction of 14.88 miles of grading and draining between Seale and Girard, and for the construction of bridges. Plans and specifications are on file at the office of the commission and information may be obtained from W. A. McCalla, state highway engineer.

Two-Year Program in South Carolina to Cost \$10,000,000.

By SAMUEL MCGOWAN, Chief Highway Commissioner, Columbia.

Construction of roads and bridges on the state highway system of South Carolina during 1925 has been under the program for the two years 1925 and 1926, according to the provisions of the Act of 1924, which placed the construction, maintenance and financing upon the State Highway Department. Funds are supplied from motor-vehicle licenses and gasoline taxes, supplemented by Federal aid. The program was to construct 925 miles of unpaved road at an estimated



CONCRETE ROAD NEAR CHICK SPRINGS, GREENVILLE, S. C.

cost of \$5,300,000, 75 miles paved to cost \$2,400,000 and bridge work to cost about \$2,500,000, making a total of \$10,200,000 for the two years.

The income from the three sources was estimated to be

\$11,240,000, and the total income was to include \$3,500,000, to be advanced by counties which are to be reimbursed. This program was modified to some extent owing to amendments made in 1925 to the Act of 1924 lengthening the period of construction.

The most important bridge completed during the year is that over the Savannah River, about eight and a half miles above the city of Savannah, being an essential link in the Atlantic Coastal Highway. This was a joint state project, and the bridge was opened to traffic in July. The fine concrete bridge with bascule span over the Ashley River at Charleston is another essential link in the Coastal Highway. Traffic is now passing over this bridge, although it is not quite completed. The length of the bridge with its approaches across the marsh is about seven-eighths of a mile. It will have a single track for street cars, a roadway 34 feet wide and two 4½-foot sidewalks. The total cost will be about \$1,250,000.

During the year eleven major bridges have been under construction. The bridge across the Savannah River near Augusta was finally completed, and the bridges across Black River in Georgetown county and two bridges across the Saluda River have been completed. Construction is progressing on the bridges over the Combahee, Pee Dee, Upper Santee, Sampit, Beaufort and Catawba rivers. Contract has been awarded for a bridge over Congaree River at Columbia to cost \$550,000.

At the end of November there were 4341 miles of road under state maintenance, of which 310 miles are paved.

\$9,100,000 in Contracts Awarded in Tennessee.

By J. M. FARRAR, Department of Highways and Public Works.

Rounding out the year 1925 with the largest single contract letting for road construction in the history of the state, Tennessee brought to a close a most successful year of construction and maintenance. On December 11, 1925, the Department of Highways and Public Works, under the direction of C. N. Bass, Acting Commissioner, opened and read 277 bids on the 24 road and bridge projects advertised to be let. Fifteen road projects, totaling 105.33 miles, were

of all types of construction, valued at \$8,022,391, were let. Following a general policy of improving the primary system of roads in Tennessee, it may be seen from the following figures that stress is laid on this feature: Total miles Federal-aid primary system, 190.70; Federal-aid secondary,



TYPICAL CONCRETE BRIDGE.

awarded at an estimated cost of \$1,997,853. Seven projects for bridges were awarded at an estimated cost of \$249,431, making a grand total of \$2,247,284.

During last year contracts for approximately 377.69 miles



STONE RIVER BRIDGE AT MURFREESBORO.

113.02; state aid, 73.97. The following table shows by types the mileage let to contract in 1925:

LET TO CONTRACT.	
Type	Miles
Grading and drainage	153.54
Bituminous macadam	45.29
Bituminous concrete	89.14
Rock asphalt	9.98
Waterbound macadam	9.94
Chert or gravel	41.75
Slag or miscellaneous	23.73

Total 377.69

Approximate figures for the total amount of construction completed during 1925 show that \$9,000,000 worth of construction has been opened to the public during the past

twelve months. The following table shows the number of miles of each type of construction.

CONSTRUCTION COMPLETED.	
Type	Miles
Grading and drainage.....	149.90
Bituminous macadam.....	46.03
Bituminous concrete.....	21.08
Cement concrete.....	41.62
Rock asphalt.....	14.65
Waterbound macadam.....	12.94
Chert or gravel.....	52.68
Base course only.....	20.15
Slag or miscellaneous.....	43.37
Surface treatment.....	6.00
Total.....	408.42

The total value of contracts let in 1925 amount to \$9,164,798, of which \$1,041,561 was expended for bridges, under separate contracts, and \$8,123,238 for roadways.

In 1925 it is estimated that \$9,579,092 was expended on construction, \$4,009,374 for maintenance (including equipment) and \$502,486 for overhead, making a total of \$14,390,952. The expenditures for 1926 will follow very closely to this amount, since the source of income will be approximately the same. Since revenue for the department is derived from the license fee on automobiles and the gasoline tax, an increase registration of automobiles will cause a slightly greater income and allow more construction.

The task of connecting up important roads in the state is well under way, and through state connection have been given such preference that great links in interstate high-

ways have been improved to such an extent that very favorable comments have been expressed on Tennessee roads. The program for next year and the years to follow



BITUMINOUS MACADAM IN WASHINGTON COUNTY.

will be the improvement of the principal roads first, with less important roads next, until the entire system is in first-class condition.



BITUMINOUS MACADAM IN WHITE COUNTY.



ARCH-TYPE BRIDGE OVER ROCKY RIVER.

\$12,000,000 in Texas Contracts—\$22,000,000 Planned for 1926.

By R. J. HANK, State Highway Engineer, Austin.

During the past year activity along construction lines has been exceedingly heavy. In this period contracts were awarded providing for the improvement of 916.29 miles of highways and four bridge projects. These contracts call for the expenditure of \$11,994,404 and will cover the construction of 79.93 miles of concrete paved roads, 1.06 miles of brick pavement, 215.48 miles of asphalt or bituminous macadam, 88.69 miles of gravel and macadam, 77 miles of shell and caliche, 454.87 miles of grading and drainage structures, and eleven exclusively bridge projects. The contracts for grading and drainage structures are for the first unit of the projects, and on these the surfacing will be constructed as soon as the grade has had ample time to become thoroughly

consolidated and when finances are available. In nearly all cases, however, funds are available, or will be when the time is opportune for the construction of the surfacing. Of the contracts let for grading and drainage structures, approximately 80 per cent of the mileage will be surfaced with a high type of pavement, it being the policy of the Texas State Highway Commission to construct its highways for permanence wherever possible.

It is estimated that approximately \$22,000,000 will be expended on state highways during 1926, and a large percentage will call for high-type pavements. Included are large bridge projects to cost \$1,600,000.

There are approximately 8,000,000 miles of designated



GRAVEL ROAD HIGHWAY IN JEFF DAVIS COUNTY, TEXAS.



MACADAM ASPHALT TOP UNDER CONSTRUCTION.



A GOOD STATE HIGHWAY IN WILBARGER COUNTY, TEXAS.

state highways in Texas, of which approximately 12,000 miles are on the Federal aid, or 7 per cent system, and since the creation of the State Highway Department in 1917 approximately 8000 miles have been completed. During 1925 the following has been completed:

PROJECTS COMPLETED DURING 1925.		
Type.	Mileage.	Cost.
Concrete	88.72	\$2,332,780.48
Bituminous on concrete.....	9.65	295,302.29
Brick on macadam.....	13.40	477,760.10
Brick on concrete.....	7.78	140,329.76
Bituminous on macadam or gravel.....	198.16	2,612,308.74
Gravel and macadam.....	440.99	4,747,401.61
Shell, caliche and sand-clay.....	85.49	912,232.16
Grading and dirt streets.....	276.98	1,958,388.15
Bridges (11).....		526,727.93
Total.....	1121.17	\$14,103,286.22



400-FOOT DECK GIRDER OVER JIM NED CREEK IN TEXAS.

\$13,700,000 Expended on Virginia State Highways in 1925.

By H. G. SHIRLEY, Chairman, State Highway Commission.

The state highway system of Virginia consists of 5000 miles, of which approximately 1820 miles are hard-surfaced and about 800 of gravel or sand-clay. During 1925 there was constructed 246 miles of hard-surfaced, 90 miles of gravel or soil and 18 miles of grading. There are under contract 366 miles of various types. The expenditure for construction during the past year was \$8,310,000, for maintenance \$3,000,000 and for state aid \$2,400,000, making a total expenditure for highways over which the State Highway Commission has supervision \$13,710,000 during 1925.

There is a hard-surfaced road extending from the West Virginia line near Martinsburg, W. Va., leading through Winchester, Harrisonburg, Staunton, Roanoke to Rocky Mount, and a very good sand-clay road from Rocky Mount to the North Carolina line.

Roanoke to Bristol is also hard-surfaced, with the exception of 13 miles, which is being placed under contract at this writing. When this 13-mile stretch has been completed it

local road programs, the total of which will compare favorably with the state, is well under way.

The commission allocated \$7,060,000 for construction to be expended during 1926. Of this amount \$1,620,000 was allocated for hard-surfacing the road leading from Washington to Richmond, and which is sufficient to complete this stretch, with the exception of two miles through the property of the District of Columbia near Occoquan.

It is felt that it is the duty of the District to build roads through its own property. A recent act of legislature giving the commission power to allocate \$1,000,000 for filling in gaps



RICHMOND TO TAPPAHANNOCK ROAD IN HANOVER COUNTY, VIRGINIA.

will give a hard-surfaced road from the West Virginia line near Martinsburg to Bristol, Tenn., completely across the state.

A system of interstate roads has been adopted and numbers assigned. Plans are being made to change the state numbers to correspond with those adopted. Direction signs, caution and other signs have or will be erected on the entire state system by the end of January.

Extensive maintenance has been carried on during the year, and all the roads have been kept in condition. The counties'



PRIVATELY BUILT ROAD TO MILL MOUNTAIN AT ROANOKE, VA.

made this possible, and as the commission considered this the most important gap to be filled during 1926 the entire \$1,000,000 was placed on it.

It will be the policy of the commission to continue these allocations until a hard-surfaced road is built from Washington to the North Carolina line. It is hoped that this can be accomplished during 1927.

There is allocated, in addition to the \$1,000,000 to fill in gaps, \$592,000 to the Bristol district, \$659,000 to the Salem district, \$690,000 to the Suffolk district, \$345,000 to the Fredericksburg district, \$602,000 to the Staunton district, \$532,000 to the Culpeper district, \$590,000 to the Lynchburg district, \$689,000 to the Richmond district.

A number of bridge projects are under way or to be let, one of the largest being across the Rappahannock River at Tappahannock, which will cost approximately \$400,000 and connecting the eight counties of the Northern Neck with Richmond. This bridge will be something over a mile in length, with approaches of almost an equal length.

It is the opinion of a great many people that the State



NEW BRIDGE AT NEWMAN'S MILL, VIRGINIA.

Legislature, which meets in January, will make available additional funds sufficient to fill in the important gaps in the main highways in the next two or three years, as well as making a considerable stride in the completion of the entire system as now laid out.

The standard signs for danger, caution and direction adopted by the American Association of State Highway Officials and the Joint Board are being erected and will be in place by the end of January. These will give the route numbers and other information necessary for the traveler to find his or her way over the state with ease and comfort.

The revenues from the automobile license fees are increasing annually and give sufficient funds for maintenance. The

income from the 2-cent gas tax for state highways and 1 cent to county feeder roads is increasing from 18 to 20 per cent a year, and from this source quite a large sum will be collected in the next few years.

The topographic and climatic conditions of the state are such that it offers many inducements for touring, and the scenery through the various mountain sections, ocean and waterfronts is superb.

An allocation was made to build a road from Williamsburg to Jamestown, where the first permanent English settlement took place, and many other historical points and shrines will be served when the system has been completed, all of which will give the public an opportunity to visit such points.

West Virginia Completes 750 Miles at Cost of \$17,600,000.

Prepared by the State Road Commission, Charleston.

During the calendar year 1925 West Virginia completed, on its state road system, 751.53 miles of new highways, of which the total cost was \$17,681,685. Hard-surfaced roads completed had a mileage of 367.12 and graded roads 384.41. There were also completed on the state system 41 bridges, costing \$748,457. Of roads not on the state system the various counties of West Virginia completed 490 miles, of which hard-surfaced roads have a mileage of 259 and graded

proved roads, of which 2187.01 are hard-surfaced and 1601.30 graded. In addition to these mileages, the state has under construction, and is carrying over into 1926, 257.75 miles of hard-surfacing and 152.38 miles of grading, all on the state system. The estimated cost of this work, including engineering, is \$10,754,973. Work is also being carried over on 17 bridges, with an estimated cost of \$330,665.

It is anticipated that the state will place under contract



GAULEY BRIDGE—AN IMPORTANT STRUCTURE COMPLETED AND OPENED TO TRAFFIC LAST YEAR.

roads 231. The total cost of this county work was approximately \$9,254,090. On the state road system West Virginia now has a completed mileage of 2201.29, of which 1308 miles are hard-surfaced and 893.20 miles graded. Improved roads not on the state system have a total mileage of 1587.02, of which 878.92 are hard-surfaced and 708.10 graded.

This gives West Virginia a total of 3788.31 miles of im-

proved roads, of which 2187.01 are hard-surfaced and 1601.30 graded. In addition to these mileages, the state has under construction, and is carrying over into 1926, 257.75 miles of hard-surfacing and 152.38 miles of grading, all on the state system. The estimated cost of this work, including engineering, is \$10,754,973. Work is also being carried over on 17 bridges, with an estimated cost of \$330,665.

It is anticipated that the state will place under contract in 1926 the proceeds of \$9,000,000 in state road bonds, which have been authorized by the legislature but not yet offered for sale.

One of the outstanding achievements of the season of 1925 was the completion of the first through route across West Virginia. This highway, which is State Route No. 3, and is West Virginia's share of the Midland Trail, runs



NEW RIVER GORGE IN FAYETTE COUNTY,
WEST VIRGINIA.



BITUMINOUS MACADAM ROAD IN
JEFFERSON COUNTY.



A NEW CONCRETE ROAD IN WETZEL
COUNTY, WEST VIRGINIA.

east and west across the state from the Virginia line near White Sulphur Springs to the Kentucky line at Kenova. Its length is 184.3 miles and it is one of the most beautiful scenic routes in the United States. From the tourist viewpoint, it is an important and convenient connection between states lying east and west of West Virginia.

A structure of historic interest, which was completed and opened to traffic, is Gauley Bridge, at the junction of the Gauley and New rivers, on the Midland Trail. This bridge



A SHALE ROAD SURFACE, TREATED WITH ASPHALT OIL,
IN HAMPSHIRE COUNTY, W. VA.

was first erected in 1822, and was destroyed three times, the third time by a Confederate army. Since the Civil War there has been a ferry at this point. The new bridge is a splendid steel and concrete structure 700 feet long. The piers of the old bridge are still standing, a short distance above the new one.

Rapid progress was made on a through route north and south, in which there remain only a few small gaps, all of which are under contract for paving, and will be completed in 1926. In every county considerable work was done on the state system, enabling the people of the state to pursue their daily occupations with greater convenience and profit.

By types, hard-surfaced roads completed on the state system during the year were: Bituminous macadam, 180.59; concrete, 60.88; gravel, 60.78; waterbound macadam, 25.34; rock asphalt, 16.95; brick, 4.64; bituminous concrete, 9.70; shale, 8.24. Mileages carried over into 1926: Bituminous macadam, 125.41; concrete, 95.06; gravel, 21.56; waterbound macadam, 12.00; brick, 0.75; bituminous concrete, 2.97.

Bossier Parish Votes \$1,500,000 Bonds

Benton, La.—A bond issue of \$1,500,000 for the construction and maintenance of roads has been voted by Bossier parish by a large majority. Tentative plans for the work embraces 37 miles of concrete and 113 miles of gravel road.

Over \$25,000,000 of \$73,000,000 Federal-Aid Road Funds Apportioned to South for Fiscal Year 1927.

Secretary of Agriculture Jardine has announced the apportionment of \$73,125,000 to the states for use in the construction of Federal-aid roads, \$25,237,000 of which are in the South. This apportionment was authorized by the Postoffice Appropriation Act of February 12, 1925, and is for the fiscal year beginning July 1, 1926.

The new funds will be spent entirely on the Federal-aid highway system under the same plan of co-operation with the states that has been in successful operation for 10 years. The roads included in the system are the most important in the country and reach directly or indirectly every city of over 5000 population. The bureau reports that approximately 10,000 miles of Federal-aid road were brought to completion during 1925 and the indications are that the coming year will be equally successful.

State.	Apportionment Fiscal year 1927.
Alabama	\$1,540,799
Arkansas	1,267,907
Florida	897,185
Georgia	1,981,189
Kentucky	1,416,809
Louisiana	1,000,764
Maryland	634,624
Mississippi	1,293,203
Missouri	2,406,847
North Carolina	1,708,544
Oklahoma	1,752,245
South Carolina	1,051,993
Tennessee	1,618,419
Texas	4,426,917
Virginia	1,445,852
West Virginia	793,936
Total South	\$25,237,236
*United States	\$73,125,000

*Includes \$365,625 for Hawaii.

Virginia Road Funds for 1926 \$7,060,000— \$4,745,000 Available for New Construction.

Richmond, Va.—At a recent meeting here of the Virginia State Highway Commission final allocation of road funds for 1926 was made. The estimated total of gross funds for the year will amount to \$7,060,000, derived from the following sources: Convict labor, \$400,000; gas tax, \$2,700,000; Federal aid, \$1,450,000; state mill tax, \$2,120,000; supervision, \$315,000, and special appropriation, \$75,000.

From the above there will be total deductions of approximately \$2,315,000, leaving a balance of \$4,745,000 for new construction. Deductions will embrace \$1,000,000 for repaying Robertson Act loans, \$1,000,000 for filling in gaps, and approximately \$315,000 to defray the cost of engineering and supervision.

The city of Durham, N. C., plans a paving program to cost about \$850,000, construction to begin in the spring.

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Outstanding Highway and Motor Transport Developments of 1925.

By THOS. H. MACDONALD, Chief, Bureau of Public Roads, Department of Agriculture.

While the past year has been one of record-making progress in the construction of new highways, the mere increase in the improved road mileage is not the most important development of the year. The construction operations which have resulted in the unprecedented addition to highway facilities represent the continuance of a program previously outlined and provided for rather than new improvements. There were, however, a number of developments pointing to the future, some of which carry confidence and others which indicate possibilities of conflict. Some of the more important of these developments are:

1. The crystallizing of the public mind as to the fields which highway transport may profitably occupy.
2. The beginning of the establishment of certain principles of taxation of the motor vehicle.
3. The overtaking of the annual highway bill by the income obtained directly from the motor vehicle.
4. Decisions of the United States Supreme Court with reference to the use of the motor vehicle in interstate commerce.
5. Continued increase in the number and utilization of motor vehicles faster than the roads are improved.
6. The progress in road improvement, which has been greater than in preceding years.
7. New developments in highway research tending to stabilize theory and practice in highway engineering and administration.
8. The definite information secured through highway transport surveys.
9. The rapid absorption of available Federal-aid funds for road improvement.

Considerable uncertainty has existed as to the place that the motor vehicle and the improved highway may take in the transportation scheme. The uncertainty has not yet been entirely eliminated. But certainly the several fields in which highway transport will be most useful, as well as the limitations which it must recognize, have to a large extent been established by definite experience and the results of careful research. The most significant feature of the year has been the number of bus lines put into operation. Only less important are the truck routes established to operate on regular-service schedules. The establishment of these routes has been much less haphazard than in the past, but the extensive development is not appreciated, because there is not available a statement of the total number of such routes or the mileage of operation, so rapid has been the development during the year. However, a careful study of the motorbus routes in the eight states of Connecticut, New Hampshire, West Virginia, Kentucky, Arizona, Oregon, Washington and Maryland develops the information shown in the following table:

State	Motor-bus routes, Miles	Ratio bus mileage to rural highway mileage.		Ratio of bus mileage to mileage of state highway system.	
		Rural highways, Miles	Per cent	State highway system, Miles	Per cent
Connecticut	*822	12,152	6.8	1,821	45
New Hampshire	311	13,841	2.2	1,367	23
West Virginia	987	35,173	2.8	3,594	27
Kentucky	3,876	68,704	5.6	8,000	48
Arizona	2,358	21,227	11.1	1,984	119
Oregon	3,739	45,475	8.2	4,464	84
Washington	4,379	45,816	9.6	3,133	140
Maryland	1,622	14,772	11.0	2,247	72
Total	18,094	257,160	7.0	26,610	68

*This is the net mileage of highways used by motorbuses; lines having a total length of 102 miles use highways used by other lines.

Naturally, the question of competition of bus lines with

existing rail lines comes inevitably into the picture. In the foregoing eight states, in which 18,094 miles of the highways are used, there are 22,094 miles of railroad, showing that the bus operation is almost as extensive as the rail operation. There cannot fail to be a certain amount of competition between the two transportation agencies, yet these bus lines have been established under the laws of the states requiring a statement of public convenience and necessity. A careful study of the situation shows that in this group of states about one-third of the number of routes and 41 per cent of the mileage come into competition with parallel rail lines, and those which compete directly or indirectly with rail lines include 62 per cent of the total number and 69 per cent of the total mileage. Thirty-one per cent of the number of routes and 31 per cent of the total mileage are non-competitive. The more than 5000 miles of non-competitive bus lines bring common-carrier service to big areas not heretofore served. For example, 15 counties in Kentucky which have no rail line are served by 19 motorbus routes, over which 31 buses are operated. All facts indicate that motorbus rates are higher than rail rates. If, therefore, the public are using and supporting these bus lines, it is because they offer more convenient or more luxurious service, or service where none existed before. The competition, where it exists, is not, generally speaking, in rates. Much of it is indirect in the sense that the motorbuses connect by direct routes points connected by railroad only indirectly. That the bus service is primarily local is indicated by the average length of route, which is 25.8 miles.

Motortruck operation is likewise becoming better understood. The principal movement of loaded trucks occurs within a zone of 29 miles. Surveys definitely show that the place of the truck is that of supplying transportation for three principal purposes: (1) The local distribution of commodities; (2) the supplementing of rail or water service; and, (3) on a small scale, the long haul of special commodities such as household effects.

During the year there has been more or less discussion of the abandonment of rail lines. A careful study by Mr. Trumbower of the Bureau of Public Roads of the official records developed the following highly important information:

Cause	Number of railroads	Percentage of number, Per cent	Length, Miles	Percentage of length, Per cent
Exhaustion of natural resources	78	65.0	1,411.20	57.8
Competition of other railroads	14	11.7	713.34	29.3
Competition of motor vehicles	10	8.4	104.46	4.3
Rearrangement of lines of railroad	5	4.1	32.64	1.3
Miscellaneous	13	10.8	177.31	7.3
Total	120	100.0	2,438.95	100.0

Based upon the logical conclusions, there is little reason to doubt the seriousness of the entrance of both the steam railways and the electric railways into both the truck and bus fields, which have been notable developments of the year.

The motor vehicle brought with it the strong demand for highway construction and the consequent expenditure of large sums of money. But, unlike many other enterprises requiring large expenditures, it brought with it a capacity to pay. The attitude toward expenditures for road improve-

ment has been too much to regard such expenditures as items of current expense and too little to regard them as capital investments capable of producing new wealth. The equitable taxation of the motor vehicle is still a rather puzzling problem. There are indications that principles are being slowly developed, but that there will remain wide differences between the states as inevitable as has been the development of inequalities in the tax laws of the 48 different state jurisdictions and the Federal Government.

With so many different types and kinds of taxation, the question may well be raised whether the limit is not being approached as to the derivation of taxes from this source. Particularly is this true when current estimates indicate that the annual tax bill of the motor vehicle is rapidly overtaking the annual bill for highway improvement and maintenance. Estimates show that the annual bill for rural highway improvements has been approximately \$1,000,000,000. A considerable part of this annual expenditure has been derived from bonds issued to mature over a period of from 20 to 30 years, so that while these bonds must in time be paid they do not represent an actual outgo of tax money collected during the year.

ESTIMATED INCOME FROM MOTOR VEHICLES FOR THE CURRENT YEAR.

Federal excise taxes.....	\$131,872,000
Motor vehicle license fees.....	256,000,000
Gasoline taxes.....	164,463,000
Personal property taxes, 20 million cars.....	*100,000,000
Municipal and local license fees.....	*10,000,000
	\$662,335,000

This estimate does not take into account the increased valuations of real property which have been due to motor-vehicle transportation, to motor business property and other new properties and new values now tax producing at their present rate largely through the motor vehicle. These facts indicate the real seriousness of the question of whether we are not reaching the limit of taxation of the motor vehicle. While it is true that the motor user can well afford to pay a large part of the tax bill, it is just as true that the utilization and extension of motor transport through improved roads is a creator of property values which in fairness should contribute to the support of the annual tax burden. In all fairness there should be a proper balance between the direct assessments upon the motor user and the funds raised by the taxation of real property.

The decisions of the United States Supreme Court to the effect that the public-service commissions of the states could not legally prohibit the operation of buses engaged in interstate commerce exclusively through a refusal or failure to issue a certificate of public convenience and necessity where these are required under the state laws recognized the establishment of transportation over the highways on an interstate basis and placed the operation of such transport lines under the constitutional provisions governing interstate commerce.

The official figures are not available as yet for the year ending December 31, but it is certain that the total registration of motor vehicles will run very near the 20,000,000-mark. On the first of July last the total was 17,716,709. The interesting development is the increase of registrations for the first six months of 1925 over those of 1924. The average increase for the country was 13.9 per cent, but the increase in the Southern states was much larger. For example, in Alabama the increase was 53.6 per cent, in Mississippi 32.6 per cent, in Tennessee 19.7 per cent. The average increase for the 12 states of Alabama, Arkansas, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Tennessee, West Virginia, Virginia and South Carolina was 24 per cent. Only in the last two were the

increases small. In the South also the rapid increase of both motortruck and motorbus routes, particularly the latter, is providing transportation in new areas heretofore poorly served or not served by any form of common carrier, and these extensions must operate in many instances over roads inadequately improved, since the progress of road improvement has not yet caught up with the motor vehicle. It would not be difficult to trace a direct connection between a 53.6 per cent increase in motor vehicles in Alabama and the expenditure of the bond issue under which the Highway Commission of that state has been operating. It has been demonstrated over and over in this country that the utilization of motor vehicles pushes far ahead of the growth of improved roads, but that the improvement of the roads does lead to a wider use of the motor vehicle than can otherwise exist.

The Federal-aid program of highway construction is a fair index of total construction activities, and during the fiscal year 1925 a larger mileage of Federal-aid roads was completed than in any preceding year. The total for the year was 11,328 miles. The Federal-aid highway system consists, up to the present time, of a total of 178,797 miles. Of this total amount approximately 57,000 miles has been improved through at least one stage or has been definitely undertaken as Federal-aid projects either in course of construction or approved for construction. But the states without Federal assistance have improved an estimated mileage of 65,000 lying on the Federal-aid system. Approximately two-thirds of the system as designated has been improved to some degree, and that it can be expected that in the course of the next five years at the present rate the entire system will have received some improvement.

It must be borne in mind that this improvement for at least two-thirds of the mileage will be of the low-cost local-surfacing types which will not be adequate to carry the traffic indefinitely. All investment of funds and all surfacings applied are built into the roads as new surfaces are added. If properly maintained, there is no loss of the original investment.

The utilization of the Federal-aid principle in highway improvement is evidenced by the absorption of Federal-aid funds. In 1922 at the beginning of the fiscal year there was available for new construction in the states more than \$154,000,000. Since that time construction has been overtaking Federal authorization till on the first of July, 1927, it is estimated that the funds available for new construction would amount to \$78,000,000, or approximately equal to the authorization of \$75,000,000 per annum, which is the program on which we are now operating.

These are some of the outstanding developments of the year in highway improvement and in the development of highway transportation. The extension of the utilization of the motor vehicle which has come about during this year, and particularly in the Southern states, is the best evidence of the integrity and value of the investment which is being made for highway improvement. Not less important is the better system of maintenance which has characterized the year's operations of the state highway departments. Through the greater diligence and the improved methods of maintenance which are characterizing the efforts of the state highway departments, the low-cost roads are being held up to a state of service which was not thought possible a few years ago. The outlook for the new year is encouraging, but there is still a great need for a considerable number of the Southern states to establish their highway departments on a firmer basis and to support these departments with state funds rather than to depend upon the counties to support the expenditures necessary for the improvement of the state road systems, which in general are coincident with the Federal-aid highways in each state.

*Estimated.

THE IRON AND STEEL SITUATION

Steel Trade in Sound Condition.

Pittsburgh, January 4—[Special.]—The steel market remains relatively dull as to actual turnover in orders and specifications, while the industry is very active in production and shipments.

The steel trade entered the new year under particularly favorable auspices. The heavy production and shipments in the past three months, attended by practically no accumulation of stocks in buyers' hands, as is claimed, indicated a very high rate of actual consumption, there being no apparent reason for consumption, as a whole, to decrease in the next few months.

The outlook from the standpoint of steel buyers is exceptionally favorable, given such active conditions as now exist, since the mills have been indisposed to press their advantage, resulting from heavy consumption and comfortably large rolling schedules, by attempting price advances. Some of the advances made a year ago were quite distasteful to buyers and discouraged buying. Such action is being avoided this time. Mills hope for higher prices, but only through the medium of gradual stiffening in open market trading.

The maintenance of steel deliveries in December, with scarcely any discernible decrease, when buyers would wish to reduce stocks on account of inventory, indicated that there were no stocks to be reduced. Deliveries now are proving very acceptable, for otherwise there would have been more closing of mills last week on account of the holiday.

The conservative price policy of mills in general is well exemplified in the case of wire products. The regular thing, according to old and established practices, at a juncture like this, would be for mills to book customers very fully on wire products for 60 or 90 days in the new year and then advance prices on or about January 1 to stimulate specifying. There has been some contracting, but not a great deal, and there is no disposition to advance prices at this time. Business is to be sought in the form of actual orders for shipment at mill convenience, rather than in the form of contracts, subject to specification at intervals. Buying is expected to begin increasing rather sharply by about the middle of January, with inventory work out of the way.

The wire trade of the past year has been rather poor, on the whole, comparing unfavorably with the trade in structural material, sheets, pipe and tinplate. For a couple months past wire-mill operations have been at only about 65 per cent, and part of the product has gone to replenish mill stocks, there being the usual accumulation of fencing against spring distribution and a piecing out of nail stocks to take care of the larger orders expected in January. The increased buying power of the farmers, so much talked of for a year past and exemplified by the much greater activity in agricultural implements, is expected to work out in fencing and other wire products in 1926. Dwelling house and other small building operations, involving much nail consumption, are expected to be large.

The market in wire products is firm on the basis of 2.50 cents for plain wire and \$2.65 for nails.

Prospects for consumption of oil-country tubular goods in the next few months are considered very good, while the past year has been a decidedly good one, possibly making a new record in production of line pipe, casing, tubing and other oil and gas field material. Drilling permits in the mid-continent field issued in the first fortnight of December were nearly double those of a year earlier, when oil prospects seemed much better than they turned out to be a few months later.

Connellsville coke prices have subsided after their pre-

Christmas bulge. The trade has expected a heavy demand for a month or so after a settlement of the anthracite suspension should be reached, but at moderate prices. Pig iron continues dull and firm.

Outlook Is Promising in South.

Birmingham, Ala., January 4—The new year's business already looks promising, there are indications of a need for more iron than has been contracted for and the smaller consumers are assured of steady operation for some time to come. Furnace interests have started the year with sales covering well the probable make for the first three months. Quotations are firm on the turn of the year, ranging from \$22 to \$23 per ton, No. 2 foundry, while a few carlots sale were made during the past few weeks at 50 cents premium on the higher price.

The larger melters of iron, the cast-iron pressure-pipe makers, have given indications that they will manufacture a large quantity of pipe. The United States Cast Iron Pipe & Foundry Co., with four large pipe shops in this district; the American, the National and the McWane companies, all manufacturing the pressure pipe, have booked much business through the winter and are assured of very healthy bookings by early spring. Increased production in pressure pipe has also been announced for the near future, one of the larger companies adding to its cupola capacity and another company building a new pipe shop altogether. Quantities of pressure pipe are being shipped to Florida.

The cast-iron soil-pipe shops of the district are getting back into a steady pace, too, the expectations being that the demand will show improvement. Throughout the Southern territory reports have it that there are building programs which call for more or less soil pipe and fittings.

Foundries and machine shops have also entered into the new year with expectations of active business, and the railroad accessory shops are also well supplied with business. The prospects are exceedingly bright for twelve months of steady production.

The coal industry continues very active. There is demand for every ton of coal, steam and domestic, that is being mined. The collaboration of statistics shows that the output is not very much under the 20,000,000-ton mark—around 19,750,000 tons, against 19,615,000 tons in 1924. The record year's production was in 1923, when 20,919,000 tons were produced. The coke trade is also very good now and promises to continue active for months. The output of 6,000,000 tons for the past year has been reached, if not exceeded, it is believed.

The scrap iron and steel market is fairly good, the best information being that dealers have business already booked on which delivery will be seen for three months to come. Heavy melted steel is selling at \$14 per ton and other quotations are being maintained at prices which have prevailed for the past four weeks.

PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$22 to \$23; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$22.50 to \$23.50; iron of 2.75 to 3.25 per cent silicon, \$23 to \$24; iron of 3.25 to 3.75 per cent silicon, \$23.50 to \$24.50; iron of 3.75 to 4.25 per cent silicon, \$24 to \$25; charcoal iron, f. o. b. furnaces, \$30 to \$32.

OLD MATERIAL.

Old steel axles.....	\$19.00 to \$20.00
Old iron axles.....	18.00 to 18.50
Old steel rails.....	14.00 to 15.00
Heavy melting steel.....	14.00 to 15.00
No. 1 cast.....	17.00 to 18.00
Stove plate.....	14.00 to 15.00
No. 1 R. R. wrought.....	13.00 to 14.00
Old car wheels.....	16.00 to 16.50
Old tramcar wheels.....	17.00 to 17.50
Machine shop turnings.....	8.00 to 8.50
Cast iron borings.....	8.00 to 9.00
Cast iron borings (Chem.).....	15.50 to 16.50

RAILROADS

TO IMPROVE TRAFFIC CONDITIONS. Shippers' Regional Advisory Boards in Conference to Continue Effective Work.

The Car Service Division of the American Railway Association, Washington, D. C., says:

"For the purpose of discussing interrelated problems of the shippers and the carriers, as well as matters pertaining to the organization, policy and conduct of the various Shippers' Regional Advisory Boards organized throughout the United States, the first joint conference of the members of those boards will take place at the Blackstone Hotel in Chicago on January 7 and 8. A large number of subjects of general interest will come up for consideration at the meeting, which will be open to the public.

"Among the matters to be taken up will be reports by each Regional Advisory Board relative to economic conditions in the various districts and a survey of existing transportation conditions. Plans will also be discussed in respect to the submission of uniform reports by the various boards so that it will always be possible, by placing these reports together, to obtain a composite picture of general business conditions throughout the United States which will enable the railroads to anticipate transportation demands.

"Twelve Shippers' Regional Advisory Boards have already been organized throughout the country, the territory of each board in a general way corresponding to that of the various Federal Reserve Boards, and these Shippers' Boards are functioning successfully. In fact, it has largely been due to the active co-operation of the shippers through these boards that the railroads in 1925 handled without difficulty the greatest freight traffic on record, measured by the number of cars loaded with revenue freight.

"Except for the situation in Florida, where a Florida division of the Southeastern Shippers' Regional Advisory Board has been organized with a view of solving the transportation problems that exist there, no major complaints as to the service the railroads have rendered in 1925 have been made to the Interstate Commerce Commission, all of these matters having been solved satisfactorily at conferences between the various boards and representatives of the railroads."

New Cars and Engines Placed in Service.

Class 1 railroads during the first 11 months of 1925 placed in service 123,858 freight cars, according to reports filed by the carriers with the Car Service Division of the American Railway Association. Of this total, 4615 were placed in service during November, including 1726 box cars, 1975 coal cars and 395 refrigerator cars. Freight cars on order on December 1 totaled 27,721, compared with 45,095 on the same date last year and 36,789 in 1923. Class 1 railroads during the first 11 months in 1925 placed in service 1604 steam locomotives and on December 1 had 339 locomotives on order. During November 112 locomotives were installed in service. All of these figures include new, rebuilt and leased equipment.

Over 51,000,000 Carloads of Freight in 1925.

Cars loaded with revenue freight continue to exceed in number the records of all previous years, the total for the week of December 19 having been 967,886 cars, according to reports filed by the railroads with the Car Service Division of the American Railway Association. This was an increase of 67,232 cars over the same week last year, but owing to the usual seasonal decline in traffic the total for the week

of December 19 was a decrease of 40,938 cars under the preceding week. Since January 1, 1925, there were 50,476,883 cars loaded with revenue freight, which indicates that when the figures for the week of December 26 are complete they will show that more than 51,000,000 cars have been loaded during the year 1925, as compared with less than 49,000,000 during 1924.

Important Bridge Work on Southern Railway.

Three large new bridges are to be built by the Southern Railway system on its line between Rome, Ga., and York, Ala., and five other bridge improvement projects are to be carried out immediately at points on the Mobile, Birmingham and Memphis divisions. Near Nottingham a new bridge, 162 feet long, consisting of two 81-foot deck-plate girder spans and a new concrete center pier, will replace the present bridge spanning Talladega River. At Tallassa Hatchie, near Childersburg, a new bridge, 215 feet 4 inches long, is to be built, to consist of two 81-foot and two 26-foot 8-inch deck girders on new concrete masonry.

A new bridge, 404 feet long, will be built across Mulberry Creek near Fremont to replace the present bridge and trestle. The new bridge will consist of two 147-foot through truss spans and two 55-foot deck-girder spans, all to be erected on new concrete piers. A new concrete pier is to be built at the Cahaba River bridge near Harrell.

On the line between Marion Junction and Mobile two new bridges over Little Chillahatchie near Alberta are to be built, one to consist of two deck-plate girder spans 37-feet and 32-feet 2-inches long, and the other of one 40-foot 7-inch deck-girder span.

On the Birmingham-Atlanta line a new bridge is to be built across the Tallapoosa River, consisting of two 50-foot deck-girder span and a new concrete center pier.

On the Chattanooga-Memphis line, near Iuka, Miss., the bridge spanning Clear Creek will be improved by remodeling the present masonry and installing a new deck-girder span.

Railroad Appointments.

The Mobile & Ohio Railroad Co. has appointed B. T. Smith commercial agent at 512 Stewart Building, 280 Broadway, New York, N. Y. The company has also established a freight-traffic agency at Minneapolis, Minn., with office at Rooms 840-842 Metropolitan Life Building, and A. A. Thorbertson, commercial agent, in charge. Both of these appointments were effective January 1.

The Southern Railway Co. made the following appointments January 1: William Maxwell, assistant to general superintendent, headquarters Spartanburg, S. C.; M. O. Dunbar, superintendent, Spartanburg division, headquarters also at Spartanburg, vice Mr. Maxwell. The office of the general superintendent, J. W. Wassum, is at Charlotte, N. C.

Automatic Signals on Seaboard Main Line.

The Automatic Signal Construction Co. is building an automatic signal system on the Seaboard Air Line between Richmond, Va., and Hamlet, N. C., the cost to be \$830,000. It is stated that an increase of 25 per cent in the movement of trains will be possible after the installation is completed. It is already complete from Richmond to Raleigh and all is to be finished by February 1. Current for operation is to be supplied by local power companies along the railroad.

The city of San Antonio, Texas, Fred Fried, city clerk, has sold \$1,000,000 of 4½ per cent public-improvement bonds to Austin, Grant & Co. of New York at par, accrued interest and premium of \$6250.

CONSTRUCTION DEPARTMENT

EXPLANATORY

Additional information is published about all enterprises mentioned in this department as soon as such data can be obtained.

An asterisk (*) following an item indicates that the enterprise has been reported in a preceding issue.

DAILY BULLETIN

The Daily Bulletin is published every business day to enable its subscribers to follow up promptly the industrial, commercial, railroad, financial, building and general business development of the South and Southwest. To machinery manufacturers and dealers, contractors, engineers, and others who require daily information of every new enterprise organized and details about important additions to enterprises already established, the Daily Bulletin is invaluable. Subscription price, \$30.00 a year.

Airplane Plants, Stations, Etc.

Mo., St. Joseph—Lawhon Construction Co., 905 Edmond St., has contract at \$18,500 for hangar at Rosecrans municipal air field, 140x80 ft.

Bridges, Culverts and Viaducts

Proposed Construction

Ala., Birmingham—City Commrs. contemplate repaving Weatherly viaduct on First Ave.; erect bridge over Village Creek on Twenty-fourth St., estimated cost \$17,000 to \$18,000; A. J. Hawkins, City Engr.

Fla., Boca Raton—See Land Development.

Fla., Miami—City Commrs. plan building 5 bridges. See Roads, Streets, Paving.

Ga., Elbert—Elberton County, Ga., and Anderson County, S. C., Commrs. receive bids probably in Feb. for Sanders' Ferry Bridge over Savannah River between Anderson and Elbert Counties; O. H. Smith, Elbert County Commr.

Ga., Summerville—State Highway Dept., East Point, plans bridge over Chattooga River at Trion, on Dixie Highway, Chattooga County; also road from new bridge to Walker County line.

Md., Baltimore—Board of Awards, Howard W. Jackson, Mayor, received low bid from J. L. Robinson Construction Co., 1130 W. Lafayette Ave., at \$246,585, for Mt. Washington viaduct, over tracks of Northern Central Ry. and Jones Falls Valley, connecting South and Kelly Aves. with Falls Road.*

Tenn., Knoxville—Knox County Highway Comm., H. E. Goetz, Chmn., plans Broadway underpass near Whittle Springs.

Tex., Batrop—State Highway Comm., Hal Mosely, Chmn., Austin, received low bid from Austin Bridge Co., 1813 Clarence St., Dallas, for 67-ft. creosoted timber pile trestle bridge across Primms Lake, State Highway No. 71.*

Tex., Meridian—Bosque County, B. F. Word, County Judge, plans overpass on Highway No. 67, between Clifton and Meridian, estimated cost \$18,500; G. C. Wickline, State Bridge Engr.

Tex., Richmond—Fort Bend County, W. I. McFarland, County Judge, plans placing gravel or crushed stone on 1500-ft. approaches to Rosenberg Bridge; C. H. Kendall, Engr., Sugarland.

Tex., San Antonio—Bexar County, Augustus McCloskey, County Judge, receives bids Feb. 3 for 17 bridges and culverts: County Commrs., Precinct No. 1, 215-ft. concrete girder bridge over Leon Creek; 33-ft. 4-in. concrete multiple box culvert over Indian Creek. 86-ft. concrete girder bridge over Medio Creek; concrete approaches to Medina River Bridge, 129-ft. long, each, also remodel present steel truss bridge; 54-ft. concrete multiple box culvert over Live Oak Slough, all on Quintana road, between San Antonio and Von Ormy; Commrs. Precinct No. 2, extend present concrete slab bridge on W. Commerce St.; 67-ft. multiple concrete box culvert on W. Commerce St.; multiple concrete box culverts, all over Zarzamora Creek; Precinct No. 3, 220-ft. concrete slab bridge over Olmos Creek on Blanco road; 22½-ft. multiple box culvert on Blanco road; concrete drop box culvert on Loch Hill-Selma road. Precinct No. 4, 66-ft. concrete girder bridge over Rozillo Creek on New Sulphur Springs road; 58-ft. concrete multiple box culvert over Chupaderas Creek on Sulphur Springs road; 93-ft. concrete girder bridge over Caleveras Creek on Elmendorf-Adkins road; 117-ft. concrete girder

bridge over Caleveras Creek on Elmendorf-Lavernia road; 93-ft. concrete girder bridge over Chupaderas Creek on Elmendorf-Adkins road; A. C. Pancoast, County Engr.

Va., Alexandria—State Highway Comm., Richmond, allocated \$35,000 toward bridge over Hunting Creek, in southern section of city; cost \$70,000.

Contracts Awarded

Fla., St. Petersburg—City Comm., let contract to J. Paul Jones, at \$23,000, for bridge over Booker Creek and Third St., South.

Miss., Rockport—Copiah County Board of Supvrs., Hazelhurst, let contract to W. L. Simmons for repairs, etc., of iron bridge over Pearl River at Rockport.

Okla., Eufaula—State Highway Dept., Oklahoma City, let contract to Concrete & Steel Construction Co., 223 W. Third St., Joplin, at \$12,000, to rebuild burned approach to bridge over Canadian River, south of Eufaula.

Tex., El Paso—El Paso County let contract for 2 culverts and bridge. See Construction News—Roads, Streets, Paving.

Tex., San Antonio—City, John W. Tobin, Mayor, let contract to Pryor & Jeffrey, Builders' Exchange Bldg., at \$26,631, for 85-ft. reinforced concrete bridge across San Antonio River at Fourth St.*

Canning and Packing Plants

Miss., Ripley—O. F. Street and others interested in canning plant.

Tenn., Jellico Plains—Sokley Bros., Newport, reported interested in establishment of cannery.

Va., Bedford—Kentucky Canning Co., capital \$100,000, incorporated; Landon Lowry, R. Q. Lowry.

Clayworking Plants

Fla., Orlando—Orlando Potteries, Apopka Rd., reported let contract to Carl B. Harrop, Columbus, O., for erection of pottery plant in Fairville; cost \$100,000.

W. Va., Clarksburg—McNicol Pottery Co., John A. McNicol, V. P., reported to install \$50,000 machinery to manufacture chinaware.

Coal Mines and Coke Ovens

Ky., Owensboro—Lily Meade Coal Corp., capital \$14,000, chartered; R. L. O'Bryan, Wm. J. Mulligan.

Ky., Whitesburg—Day Coal Mining Co., incorporated; S. B. Pearce, C. H. Latimore.

West Virginia—John P. Whelan of Cleveland, Ohio, and associates will organize company; acquired Polar mine No. 3 in Lewis County, of the National Coal Mining Co., Pittsburgh, Pa.; will develop.

W. Va., Arnettville—Imperial Coal Corp., 344 Madison Ave., New York, reported acquired coke plant and 2000 acres coal land; plant has capacity of 1000 tons daily; propose to increase output to 2500 tons daily.

W. Va., Wellsburg—West Virginia-Pittsburgh Coal Co., Union Trust Bldg., D. N. Sentsinger, Purchasing Agent, Cleveland, Ohio, advises: We have not decided just what type of tippie we will erect at Gilchrist mine (lately burned); however, constructing temporary tippie for immediate situation; later will probably construct steel tippie equipped with picking tables, shaker screens and loading booms.

Concrete and Cement Plants

Fla., Fulford—Julius Keller, Jr., Pres., Kelbay Corp., 342 Madison Ave., New York, reported, establish cement block plant, capacity 25,000 blocks daily; estimated cost \$100,000; also contemplates building 10 plants throughout Florida; Mr. Keller's headquarters at Fleetwood Hotel, Miami Beach.

Cotton Compress and Gins

Ala., Huntsville—Dixie Warehouse and Storage Co., capital \$50,000, incorporated; J. B. Woodall, Lawrence Cooper; reported has site and will erect warehouse 150x489 ft., capacity 10,000 bales.

Okla., Mangum—Farmers Gin Co., capital \$40,000, incorporated; W. J. Roberts, W. A. Reik.

Cottonseed-Oil Mills

Tex., Amarillo—H. W. Allen, Shamrock, reported acquired 10-acre site; erect \$250,000 plant.

Drainage, Dredging and Irrigation

Fla., St. Petersburg—See Miscellaneous Construction.

Electric Light and Power

Fla., Boca Raton—See Land Development.

Fla., Dania—See Land Development.

Fla., Eau Gallie—City will install white way. See Financial News—Bond Issues Proposed.

Fla., Homestead—City Council let contract to McIntosh & Seymour Corp., Auburn, N. Y., for two 600 H. P. full Diesel engines, with pumps, oil storage tanks, pipes, etc.*

Fla., Jacksonville—See Land Development.

Fla., Kissimmee—City contemplates electric light improvements. (See Financial News—Bond Issues Proposed.)

Fla., Lake City—Florida Power & Light Co., 27 N. W. First St., Miami, reported acquired municipal power and ice plant, subject to approval by people.

Fla., Palm Beach—See Land Development.

Fla., Pensacola—See Land Development.

Fla., Sebring—See Land Development.

Fla., Tampa—Tampa Electric Co., Peter O. Knight, Pres., Tampa & Cass Sts., reported to construct electric light plant on Alafia River dredge of 16-ft. channel, 2½ miles long; engineers now making preliminary plans for installing 17,000 h. p. turbo generator with 4 boilers and new stack at W. Jackson St. station and 13,500 volt feeder in Eleventh Ave. substation.

Fla., Tampa—See Land Development.

Fla., Vero Beach—City, B. T. Redstone, Mayor, receives bids Jan. 28 for ornamental white way street lighting system. (See Machinery Wanted—White Way System.)

Fla., Winter Park—See Land Development.

Ga., Douglasville—City voted to sell distribution system to Georgia Railway & Power Co., Atlanta.

La., DeRidder—Louisiana Public Utilities Co., New Orleans, reported acquired DeRidder Light & Power Co.'s plant.

Md., Baltimore—Consolidated Gas Electric Light & Power Co., Lexington Bldg., will make the following improvements during 1926: for power plant, \$2,871,518, including electric generating station located on water front in southern section of city, and expenditures for structures, boiler equipment, switching and other electrical equipment in existing power plants; substation, \$808,281, for

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covering land, structures, equipment for new substations and equipment for existing substation, transmission and distribution systems, \$1,956,537, for overhead and underground transmission and distribution systems; miscellaneous, \$46,643, consists of expenditures to be made for structures, equipment for shops and laboratories; total expenditures for electric improvements, \$5,682,982.

Miss., Gulfport—See Land Development.

Miss., Yazoo City—Mississippi Power & Light Co., Jackson, reported to acquire municipal power and light plant.

Mo., Kansas City—Southern Utilities Development Co., capital \$50,000, incorporated; W. S. Barnes, 4118 Scarrit St.

Mo., Puxico—Missouri Power and Development Co. will probably rebuild burned plant.

N. C., Elkin—Southern Power Co., Charlotte, will extend lines from Winston-Salem and take over all lighting and power around town of Elkin, and will be given a franchise.*

N. C., Hendersonville—Electric Supply & Equipment Co., 220 N. First St., Charlotte, has contract with Laurel Park Estates, Inc., to furnish materials and apparatus for lighting approximately 5 miles highway through Laurel Park Estates to Jump Off Mountain; Blue Ridge Power Co., Hendersonville, will make installation.*

Tenn., Chattanooga—Tennessee Electric Power Co. applied to State Railroad and Public Utilities Comm. for permission to issue and sell \$1,000,000 of preferred stock.

Tenn., Johnson City—See Land Development.

Tenn., Lawrenceburg—City Commrs. reported rejected bid of Southern Cities Power Co. for purchase of 2 power plants.

Tex., Burnet—Texas Public Utilities Co., Dallas, reported plans street lighting system.

Tex., Elgin—Texas Power & Light Co., Austin, reported acquired Elgin Light & Ice plant from A. E. Clausnitzer, Kennedy.

Fertilizer Plants

N. C., Clinton—Sampson Fertilizer Co., capital \$100,000, incorporated; H. L. Stewart, W. M. Peterson.

S. C., Charleston—Merchants Fertilizer and Phosphate Co., 130 E. Bay St., reported to rebuild burned buildings.

Flour, Feed and Meal Mills

Mo., Kansas City—Ralston-Purina Co., Lewis B. Stewart, Mgr., Rochester and Scott Sts., reported to enlarge alfalfa grinding plant and double hay storage space; install hay grinder.

N. C., High Point—High Point Grain & Feed Co., capital \$25,000, incorporated; R. C. Soyars, C. A. Lewis.

Tex., Houston—Houston Poultry Feed & Fertilizer Co., capital \$10,000, incorporated; R. W. Archer, 4508 San Jacinto St.

W. Va., Huntington—W. W. Payne Co., capital \$100,000, incorporated; W. W. Payne, 732 W. 14th St.

Foundry and Machine Plants

Ala., Birmingham—Road-Building Machinery—G. C. Phillips Tractor Co., 116 N. 17th St., acquired site, cor. 17th St. and Second Ave.; will erect 1-story brick building with foundation for addition of two or more stories.

Ala., Gadsden—Stoves and Ranges—A. & J. Manufacturing Co., J. C. Greene, Sec., Locust St., will erect one \$10,000 building for office and gas range department, 140x50 ft., brick, concrete floors, composition roof; and one \$8000 building, 130x80 ft., wood frame, concrete oor, galvanized steel walls and roof, used as addition to warehouse; construction by owners; install japanning oven to be furnished by Swarthout Co., 18511 Euclid Ave., Cleveland, Ohio.*

Ala., Sheffield—King Manufacturing Co. of St. Joseph, Mo., reported establish plant to manufacture white-way standards; daily capacity 200.

Mo., Kansas City—Heuler Wire & Iron Works, Inc., chartered; Carl A. Heuler, 714 Ridge Arcade Bldg.

N. C., Durham—Granville Iron Corp., John C. Rogers, Sec., increased capital.

N. C., Greensboro—Laundry Machinery—E. J. Talley Laundry Machinery Co., Battle Ground Rd., capital \$100,000, incorporated; E. J. Talley.

Okla., Blackwell—Acme Foundry & Machine Co., Coffeyville, Kan.; all work on plant

to be done by owners; has equipment for the present; operate machine shop, gray iron and brass foundry and pattern shop.*

Okla., Tulsa—Tulsa Brass Casting Co., incorporated; O. E. French, J. R. Johnston.

Tenn., Oneida—Oneida Machinery Co., E. C. Coleman, Sec., completing building for general repair shop and all other kinds of mining and sawmill machinery; let contract to The E. A. Kinsey Co. of Cincinnati, Ohio, for equipment.*

W. Va., Huntington—See Miscellaneous Enterprises.

Gas and Oil Enterprises

Fla., Ocala—Ocala Gas Co., Wm. M. Mushert, Pres., Trenton, N. J., reported to expend \$20,000 in improvements to plant.

Md., Baltimore—Consolidated Gas Electric Light & Power Co., Lexington Bldg., will make following improvements during 1926: for gas works and holder stations, \$350,402, consisting of works and stations structures, gas generating equipment, purification apparatus and other equipments for manufacture and storage of gas; transmission and distribution systems, \$975,658; miscellaneous, \$13,067; sundry improvements for structures, equipment for shops and laboratories; total, \$1,369,127; also expend \$402,792 for office equipment, transportation equipment, etc.

Miss., Natchez—Southern Railway & Light Co. reported to expend \$85,000 for new gas mains.*

Okla., Blackwell—Herb Oil and Gas Co., capital \$50,000, incorporated; Z. A. Harris, Robert Ballentine.

Okla., Oklahoma City—Home Oil Co., W. A. Lipscomb, Mgr., acquired warehouse, tanks, etc., of O. E. Carnes.*

Okla., Picher—Wafford & Smith Petroleum Co., capital \$10,000, incorporated; F. B. Wafford, Miami; L. L. Smith, Canute, Kans.

Okla., Tulsa—Oklahoma Leasing & Development Co., capital \$80,000, incorporated; J. F. Murphy, J. H. Everett.

Tex., Amarillo—Hutchinson County Oil Co., capital \$120,000, incorporated; R. J. Williamson, L. W. Stolz.

Tex., Caddo—Humble Oil & Refining Co., Houston, reported acquired gasoline plant of Baltic Gasoline Co.

Tex., Dallas—Magnolia Petroleum Co., Magnolia Bldg., increased capital to \$185,000,000.

Tex., Dallas—Magnolia Pipe Line Co. increased capital to \$24,000,000.

Tex., Houston—Barcon Oil Co., capital \$10,000, incorporated; H. N. Conley, Marion Thomson.

Tex., Victoria—City reported voted gas franchise to E. H. Buckner, Scanlan Bldg., Houston.

W. Va., Morgantown—Livingston Oil and Gas Co., capital \$50,000, incorporated; Clyde W. Wellen, Bank of Morgantown Bldg.

Ice and Cold-Storage Plants

Ark., El Dorado—The Gann Ice Plant Co. will erect \$30,000 ice plant.

Ark., Mammoth Spring—Mammoth Spring Ice Co., Inc., begun building of 50x80-ft. plant, stone, concrete floors, Carey roof, install \$18,000 equipment, furnished by Frick Co., Waynesboro, Pa.; construction by H. C. Bellamy, Mammoth Springs.*

Fla., Fort Myers—Lecco Ice Co., incorporated; T. B. Richardson, N. Cockrell.

Fla., Lake City—See Electric Light and Power Plants.

Fla., Tampa—Citizens Ice Co., capital \$30,000, incorporated; M. M. Hendrix; J. D. Stuart.

La., Addis—Addis Ice Co., E. A. Bird, Mgr., reported, double capacity of plant; probably install Fairbanks-Morse power unit.

Mo., Springfield—Producers Ice & Mfg. Co., 412 W. Chase St., increased capital, \$25,000 to \$50,000.

Okla., Carnegie—Carnegie Ice Co., capital \$25,000, incorporated; J. H. Hill, C. F. Key, both Enid.

Okla., Edmond—Edmond Ice Co., 101 W. Second St., has begun construction of 25x80-ft. 10-in. plant addition, brick, concrete floors, Carey roofing, install \$18,000 equipment for manufacture of ice.*

Okla., Stillwater—Lehman Ice Co. will construct by day labor \$18,000 plant addition, 30x75-ft., brick and reinforced concrete; structural steel and steel sash furnished by J. B. Klein Iron Foundry Co., 1006 W. Second St., Oklahoma City.

Tenn., Big Sandy—Big Sandy Ice Co., W. L. Goforth, will install either 10 or 20 ton ice plant. (See Machinery Wanted—Ice Plant.)*

Tex., Paris—Southern Ice & Utilities Co., J. M. Record, Mgr., contemplates building cold storage plant, 1-story, brick and concrete; construction probably by day labor.

Tex., Vernon—Vernon Electric & Ice Co. let contract to Sumner-Sollitt Co., National Bank of Commerce Bldg., San Antonio, at \$23,464 for addition to ice plant.*

Land Development

Ark., Lowell—L. B. Kelton will develop 2-acre tourist park.

Ark., Siloam Springs—Dunlap Realty Co., W. H. Dunlap, R. E. Fenno; will develop 100 acres.

Fla., Arcadia—Mila Park Development Co., capital \$25,000, incorporated; J. W. Yates, A. Michna.

Fla., Bartow—Bartow Municipal Golf Course reported let contract to W. D. Clark, Jacksonville, to prepare plan and supervise construction of additional 9-hole golf course.*

Fla., Boca Raton—Mizner Development Corp., Addison Mizner, Pres., Palm Beach, has let the following contracts in connection with development of Boca Raton: Homer Vivian and C. A. Steed, West Palm Beach, clearing of property; Dwight P. Robinson & Co., Inc., 125 E. 46th St., New York, for Ritz-Carlton Hotel and The Cloister; Wm. S. Flynn, Ardmore, Pa., for 2 golf courses; Donald Ross, 1 golf course; Dwight P. Robinson & Co. and J. T. Miller & Co. for El Camino Real (boulevard 160 to 220 ft. wide); Mark Reardon, Memphis, and Cement Gun Co., Allentown, Pa., sanitation; C. A. Steed, West Palm Beach, water distribution; American Light & Power Co., for electric light and power; Southern Bell Telephone & Telegraph Co., Atlanta, local and long distance telephone connections; Dwight P. Robinson & Co., Venetian Arch Bridge on Camino Real; Henry Vought & Co., Inc., Palm Beach and 6 E. 46th St., New York, for administration building.*

Fla., Bradenton—Bradenton Novelty Co., capital \$500,000, incorporated; H. A. Robertson, S. T. Sawyer.

Fla., Clermont—Clermont Realty Co., capital \$25,000, incorporated; J. W. Dingess; L. H. Bowman.

Fla., Clearwater—Produce Realty Co., capital \$100,000, incorporated; E. Brewer, L. Sutton.

Fla., Clewiston—Clewiston Farms Co., incorporated; K. B. Watkins, J. W. Myers.

Fla., Cocoa—Gackenback & Treat, capital \$50,000, incorporated; E. W. Gackenback, F. H. Treat.

Fla., Coral Gables—Mebak Holding Co., capital \$30,000, incorporated; G. E. Merrick, Administration Bldg.

Fla., Dania—J. M. Holding will develop Hollywood Harbor Lawns subdivision; will install water, sewers, roads, electric lights, sidewalks.

Fla., Daytona—Bleekman-Robinson, Inc., 218 N. Beach St., are owners and developers of Flagler City and Flagler Little Farms, comprising 13,000 acres in Flagler County; will be divided and platted in 5, 10, 20 and 40 acre tracts; Flagler City Holding Co. has been organized as parent corporation to operate various subsidiary corporations; will have charge of clearing, grading, building, construction, etc.*

Fla., Daytona—Intra State Development Co., capital \$10,000, incorporated; T. H. Lamar, W. H. White.

Fla., Deland—Henry C. Lonsford, Chicago, Ill., reported, acquired DeLeon Springs; will develop.

Fla., Delray—Ocean View Investment Co., capital \$40,000, incorporated; C. O. Scott, P. A. Ranson.

Fla., Eau Gallie—City will construct golf course and clubhouse. See Financial News—Bond Issues Proposed.

Fla., Fort Lauderdale—J. Harrison McCready, Flagler Arcade, Miami, reported to develop 43,000 acres near Fort Lauderdale; construct system of drainage canals, pipes and dykes.

Fla., Fort Myers—Lamolithie Housing & Development Co., capital \$400,000, incorporated; J. E. Lambie, H. E. Pheneey.

Fla., Fort Myers—Naples Bay Co., capital \$50,000, incorporated; J. A. Franklin, J. Starnes.

Fla., Fort Myers—W. J. Odom Realty Co.,

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capital \$10,000, incorporated; W. J. Odom; C. A. Powell.

Fla., Fort Myers—Orange River Gardens, capital \$20,000, incorporated; S. Eichen; B. B. Boyes.

Fla., Fort Myers—Fort Myers-New York Holding Co., capital \$10,000, incorporated; C. L. Waller, H. Clay Crawford, Jr.

Fla., Fort Myers—Stamford Securities Co., capital \$20,000, incorporated; Wm. Cohn, S. Weissman.

Fla., Hollywood—P. V. Realty Co., capital \$12,000, incorporated; W. A. Peavy, H. J. Peavy.

Fla., Hollywood—Gould Realty Co., incorporated; B. R. Clisco, W. W. Lynch.

Fla., Indrio—Phelps Hendrickson Co., 22 W. Monroe St., Chicago, Ill., are developing 232 acres for golf course; grading lakes, installing water system; cost \$300,000; Langford & Moreau, Ltd., 2405 Grace St., Chicago, Ill., Landscape Archts.*

Fla., Jacksonville—Inverness Co., capital \$200,000, incorporated; F. B. Rodgers, H. C. Ford.

Fla., Jacksonville—Rapid Building Co., capital \$100,000, incorporated; M. H. Levin, I. Levin.

Fla., Jacksonville—Midland Realty Co., Col. Raymond C. Turk, Pres., Julia St., reported to develop Lake Forest subdivision; install water, sewers, electric lights, roads and streets. Consolidated Development and Engineering Corp., Engrs.; Mellen C. Greely, Supervising Archt., 111 N. Adams St.

Fla., Jacksonville—Treasure Point Co., capital \$15,000, incorporated; E. V. Toomer, 52 W. Duval St.

Fla., Jacksonville—Swann & Co., capital \$50,000, incorporated; A. Swann, Jr., M. Sparks.

Fla., Key West—Coral Isles, Inc., capital \$15,000, incorporated; H. Parker, 753 S. W. Goerk.

Fla., Kissimmee—City will improve parks. (See Financial News—Bond Issues Proposed.)

Fla., Lakeland—Southland Realty & Mortgage Co., capital \$25,000, incorporated; R. B. McKinney, R. S. Cornwall.

Fla., Lake Worth—Menohar-Edwards Realty Co., capital \$25,000, incorporated; W. E. Menohar; C. R. Edwards.

Fla., Little River—Kavan Knoll Co., capital \$10,000, incorporated; W. M. Shiner, F. J. Phelan.

Fla., Manatee—Manatee Home Builders, Inc., capital \$50,000, incorporated; F. E. McClaron; W. F. Spangler.

Fla., Miami—June Properties, Inc., capital \$10,000, incorporated; C. H. Taylor, 178 S. W. 178 S. W. 15th Ave.

Fla., Miami—A. R. Robinson Development Co., capital \$175,000, incorporated; A. R. Robinson, C. R. Yates.

Fla., Miami—Flowerland Realty Co., capital \$10,000, incorporated; H. Trafford, 125 N. E. First St.

Fla., Miami—Weimer Realty Co., capital \$150,000, incorporated; W. L. Payne, 153 E. Flagler St.

Fla., Miami—International Developers, Inc., capital \$25,000, incorporated; H. A. Howell, C. O. McCawley.

Fla., Miami—F. W. and M. L. Bell, Inc., capital \$100,000, incorporated; F. W. Bell, 31 Elmira St.

Fla., Miami—Royal Park Farms, Inc., incorporated; Wilson Post and John J. Reich, both New York; Stanley R. Harris, 2901 Connecticut Ave. N. W., Washington, D. C., reported acquired 2000 acres; will develop.

Fla., Miami—J. G. Morales organized Valencia Landscaping Engineering, Inc., 606 N. W. Fortieth St.; develop subdivision.

Fla., Miami—Walter Williamson, 502 S. W. 13th Ave., of Williamson & Banker, developers of Commercial Riverside, subdivision; reported let contract to Comer & Ebsary, 37 N. Bayshore Drive, for bulkheading south shore of Miami River; are laying water mains, sewers and gas mains; will soon let contracts for grading and paving streets.

Fla., Miami—Lake Beresford Development Co., capital \$300,000, incorporated; S. A. Kagey, 127 N. E. First St.

Fla., Miami—Home Builders Co., capital \$50,000, incorporated; M. L. Ducharme, F. J. Schafer.

Fla., Miami—Selrite Realty Co., capital \$15,000, incorporated; H. Parker, 753 W. First St.

Fla., Miami—Kleir & O'Donnell, Inc., Commercial Arcade, 127 N. E. First Ave., are developing Acres of Gold subdivision.

Fla., Miami—Bank Properties, Inc., capital \$200,000, incorporated; C. W. Hawkins, First Natl. Bank Bldg.

Fla., Miami—Hearn Bros., Inc., chartered; B. E. Hearn, 3142 N. W. First Ave.

Fla., Miami—Prairie Land Co., capital \$20,000, incorporated; M. Gross, 238 S. E. First Ave.

Fla., Miami—Honduras Investment Co. acquired 1280 acres in Charlotte County; will develop.

Fla., Miami—Christopher Corp., capital \$100,000, incorporated; M. C. Flynn, 4702 N. Miami Ave.

Fla., Okeechobee—Pinewood Heights, Inc., capital \$50,000, incorporated; J. W. Bishop, R. E. Hamrick.

Fla., Orlando—David U. Rothstein of Westmont Homesite Co., reported, acquired 59 acres on Lake Weldona; will develop subdivision; install roads, water, sewers.

Fla., Orlando—Charles Ray Realty Co., capital \$10,000, incorporated; W. B. Crawford, Orlando Bank & Trust Bldg.

Fla., Orlando—Douglass O'Neill-Lee, Inc., Orlando Bank & Trust Bldg., capital \$50,000, incorporated; A. R. Douglass.

Fla., Palatka—Hewitt Realty Co., capital \$10,000, incorporated; L. H. Hewitt, C. O. Sellen.

Fla., Palm Beach—Stuart Shores, Inc., 334 Australian Ave., Earl J. Reed, Treas., Lake Worth, will develop subdivision; construct boulevards, sidewalks, sewers, water, electric lights.

Fla., Palm Beach—Royal Palm Beach, capital \$15,000, incorporated; H. D. Lindsley, H. L. Ritter.

Fla., Panama City—B. L. Davis, Jacksonville, acquired and will develop 1000 acres land.

Fla., Pensacola—Escambia Groves Co., capital \$40,000, incorporated; G. E. Mead, C. B. Ford.

Fla., Pensacola—L. E. Craddock will develop Osceola Country Club estates subdivision; will install streets, sidewalks, water, sewers, telephones.

Fla., Pompano—Highland Grove Co., capital \$50,000, incorporated; J. F. Hirt, J. M. Moore.

Fla., Sebring—B. C. Young and associates reported to develop 8000 acres on Lake Istokopga.

Fla., Sebring—E. H. Sebring Development, E. H. Sebring, Pres., will develop 58 acres; install hard-surface streets, sidewalks, water and lights, expend \$50,000.*

Fla., St. Augustine—Russell H. Gress Realty Co., 45 King St., developers of Santa Rosa subdivision, are proceeding with construction program; fill will be pumped from San Sebastian River; contract for dredge let to Stanley & Gill Machinery Co., Jacksonville; engines from Venn-Severin Co., 1317 W. North Ave., Chicago, Ill.*

Fla., St. Petersburg—Canadian American Land Co., capital \$50,000, incorporated; R. Baer, M. E. Rudy.

Fla., St. Petersburg—Burgin Realty Co., capital \$100,000, incorporated; D. M. Hart, W. H. Turick.

Fla., St. Petersburg—Maximo Orchards, capital \$100,000, incorporated; M. L. Cook, 606 Hall Bldg.

Fla., St. Petersburg—Florida Land & Homes Co., capital \$350,000, incorporated; H. H. Snyder, R. P. Mitchell.

Fla., St. Petersburg—W. A. Bode & Co. are developing subdivision in Lellman Heights; will construct roads and streets, lake, cement sidewalks.

Fla., St. Petersburg—Hooten Building Co., capital \$20,000, incorporated; R. A. Hooten, E-926 17th Ave., N.

Fla., St. Petersburg—Rosary Building Co., capital \$25,000, incorporated; J. E. Ewell, M. R. Grove.

Fla., Stuart—Kreuger Park, Inc., capital \$15,000, incorporated; Q. P. Kreuger, Karl Kreuger.

Fla., Tampa—W. G. Clark, Miami, Managing Director of Tampa Beach, Inc., will expend \$27,000,000 in development of 4000 acre subdivision on East shore of Hillsborough Bay; construct hydraulic fill; seawall; \$1,800,000 for electric lighting system and possible gas system; \$2,500,000 for sewer system; \$1,700,000 for water works; \$10,500,000 for roads and streets; landscaping; Folger Johnson, Archt. V. A. McCormack, Constr. Engr., both care of Tampa Beach, Inc. (See Machinery Wanted—Building Materials; Hardware and Plumbing; Electric Wiring and Fixtures; Pipe (Sewer and Con-

crete); Poles (Electric Light); Water Mains.)

Fla., Tampa—Symonds & Co., 217 Franklin St., will develop Forest Park Estates, subdivision; construct 120-ft. boulevard, install water, sewers, electric lights.

Fla., Wewahatchka—Gulf County Land Co., capital \$25,000, incorporated; C. L. Morgan, C. E. Parker.

Fla., West Palm Beach—South Inlet Shores Corp., capital \$100,000, incorporated; E. J. Thomas, B. A. Maxfield.

Fla., Winter Park—Winter Park Golf Estate, Inc., Dr. Roland F. Hotard, Pres., will develop 360 acres land for subdivision; construct 18 miles of asphalt paving 30 ft. wide, with 18-in. concrete gutters and curbs, sidewalks, 18-hole golf course; gas and electric lights; water works; 15 acre artificial lake; \$30,000 clubhouse; P. C. Samwell, Archt.; construction by owners.*

Fla., Tampa—Plant Park Construction Co., capital \$15,000, incorporated; S. Posteln, C. W. Fields.

Fla., Tampa—Bay-View Tourist Development Co., capital \$50,000, incorporated; W. A. Miller, W. H. Teague.

Fla., West Palm Beach—Hugenot-Florida Corp., capital \$10,000, incorporated; J. R. Alteri, F. A. Chandler.

Fla., West Palm Beach—Quintain Corp., capital \$100,000, incorporated; J. T. McCarthy, P. Schroers.

Fla., West Palm Beach—A. J. Bourassa, Inc., capital \$50,000, incorporated; A. J. Bourassa, E. M. Baynes.

Fla., West Palm Beach—Schultz & Murray, Inc., capital \$25,000, incorporated; L. E. Schultz, C. S. Murray.

Fla., West Palm Beach—Earl Wright, Inc., capital \$50,000, incorporated; E. Wright, W. Gosen.

Ga., Savannah—Schley & Myers Realty Corp., incorporated; R. L. Schley, 411 E. Hall St.

Ky., Louisville—Jefferson County Realty Co., capital \$25,000, incorporated; Benjamin F. Gardner, Metropolitan Bldg.

Ky., Ludlow—Ludlow Realty Co. increased capital to \$50,000.

La., Glenmora—Glenmora Realty Co. incorporated; John W. Monroe, Elmer P. Ferguson.

La., New Orleans—Lakeside Realty and Development Co., capital \$20,000, incorporated; Henry P. Mirandona, 311 N. Peters St.

Md., Baltimore—City, Philip B. Perlman, City Solicitor, reported to expend \$1,000,000 in building interceptor sewer in valley at Herring Run in connection with park development.

Md., Baltimore—Northwest Real Estate Co., 501 Morris Bldg., increased capital, \$100,000 to \$500,000.

Miss., Gulfport—E. B. Ellis and E. C. Crocker, Hardie & Ellis Realty Co., Lambakes Bldg., 2617 Fourteenth St.; is developing Gulf Gardens subdivision; will install water, sewers, electric lights, roads and streets, sidewalks.

Miss., Gulfport—Bouslog Co., capital \$50,000, incorporated; W. H. Bouslog, Eugene Fly.

Mo., Kansas City—Carr Realty Co., incorporated; H. W. Anthony, 6012 Brookside St.

Mo., St. Louis—Grand-Washington Realty & Investment Co., incorporated; A. M. Frumberg, Bank of Commerce Bldg.

N. C., Asheville—Sunset Mountain Estates, Inc., Hamilton Block, Pres., 140 Woodward Ave., Norwood Park, reported to develop 475 acres on Sunset and Piney mountains; construct roads.

N. C., Charlotte—Piedmont-Carolina Golf and Country Club, 1004 Johnston Bldg., will construct 18-hole golf course.

N. C., Hendersonville—Pace-During Realty Co., capital \$500,000, incorporated; D. S. Pace, M. P. During.

N. C., Murphy—E. C. Moore will develop 140 acres for subdivision; construct roads.*

Okla., Watts—L. H. Henderson, Wichita, Kan., acquired 120 acres land; develop resort.

Tenn., Chattanooga—Mountaintop Land Co., Miami, incorporated; Walter S. Morrow, Pres., 112 N. E. First St., Miami, Fla.; will develop resort on Raccoon Mountain; construct 2 hotels, golf course, roads.

Tenn., Johnson City—Ralph Tucker will develop Tucker Terrace; install water, sewers, electric lights, streets, ornamental arches.

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Tex., Edinburg—W. L. Forbes, Kosse, and E. C. Couch, Weslaco, will develop 1927 acres between Edinburg and Raymondville for town-site; expend \$50,000 in improvements.*

Tex., Houston—Miller Land Co., incorporated; P. O. Settle, Scanlan Bldg.

Tex., Missouri City—Famous Farms, Inc., E. M. R. Robinson, are developing 40 acres for fruit and truck farms; install irrigation system. [See Machinery Wanted—Containers (Fruits and Vegetables).]

Tex., San Antonio—City, John W. Tobin, Mayor, reported to develop 2 golf courses.

Tex., San Antonio—San Antonio Development Co., capital \$25,000, incorporated; L. J. Hart, Gunther Bldg.

Tex., Tyler—W. H. Caldwell and Robert Allen acquired 750 acres land; develop.

Va., Norfolk—Pine Wood Park, incorporated; W. R. Ashburn, City Bank Bldg.

Lumber Enterprises

Ala., Chickasaw—J. M. Card Lumber Co., Fred Arn, Pres., Rosevale Blvd., Chattanooga, Tenn., advises: Building new mill at Chickasaw, suburb of Mobile, leased site on banks of Chickasabogue Creek and on Selma Division of Southern Ry., affording both water and rail transportation; sawmill and other machinery furnished by Wheland Co., Chattanooga.

Ark., Thornton—Stout Lumber Co., W. C. Ribenack, Pres., will rebuild plant, burned at loss of \$750,000.

Fla., Crystal River—Allen Lumber Co., Inc., capital \$50,000, chartered; G. A. Allen, B. L. Hoover.

Fla., Dade City—Highlands Milling Co., capital \$25,000, chartered; C. H. Magoon, I. M. Austin.

Fla., Jacksonville—Norwood Lumber Co., capital \$10,000, incorporated; F. M. Shore, B. A. McCubbins.

Miss., Camden—National Lumber Co., capital \$25,000, incorporated; Mrs. F. A. Jones, 1434 Broadway, Paducah, Ky.

Miss., Gulfport—Gulfport Lumber & Construction Co., capital \$20,000, incorporated; C. P. Windsor, M. H. Woodward.

Mo., Maryville—Adair Lumber Co., 609 Reliance Bldg., Kansas City, acquired lumber yard from Wm. F. Phares.

N. C., Goldston—Snipes-Gaines Lumber Co., capital \$50,000, chartered; F. R. Snipes, Sanford; B. W. Gaines, Goldston.

Tenn., Chattanooga—J. H. Etter Lumber Co., 2702 E. 30th St., increased capital, \$25,000 to \$40,000.

Tex., El Paso—Rio Grande Lumber & Fuel Co., capital \$150,000, incorporated; L. E. Saunders, 2704 San Jose St.

Tex., Robstown—E. McCaskill, reported, acquired planing mill of D. L. Worthington; plans installing additional equipment, including saws, cutters, planers, etc.

Tex., Rusk—Chamberlain Lumber Co., incorporated; E. H. Chamberlain, B. F. Sherman.

Va., Roanoke—Valley Lumber Corp., capital \$50,000, incorporated; C. K. Lemon, 109 McClanahan St., South Roanoke.

Mining

Fla., Eustis—LaBeau Sand & Dredging Co., capital \$10,000, incorporated; C. E. LaBeau, R. J. Dewey.

La., Monroe—Union Gravel Co., Inc., capital \$50,000, chartered; Geo. W. Elise, Monroe, Geo. K. Force, Baton Rouge.

La., Woodworth—Superior Sand & Gravel Co., Inc., P. L. Reagan, Pres., has 600 acres under development; daily output 20 cars; equipment all purchased.*

Miss., Hattiesburg—American Sand & Gravel Co., H. Gillit, Sec., is completing plant; monthly output 300 cars sand and gravel; equipment furnished by W. H. K. Bennett Co., 20 E. Jackson Blvd., Chicago, Ill.; Hattiesburg Saw Mill Co., Hattiesburg; Woodward Wight & Co., 451 Howard Ave., New Orleans, La.; Kemp Machinery Co., Hattiesburg.*

Mo., Springfield—Dixie Mining Co., capital \$100,000, incorporated; Geo. Mutscheler, 603 E. Harrison St.

Tenn., Nashville—C. M. Hughes & Co. having plans prepared by E. W. Cooper, Engr., 509 Deaderick St., for sand and gravel plant on banks of Cumberland river; will purchase dredge boat, tow boat, barges and other river equipment. (See Machinery Wanted—Dredge; Barges; Tow Boat; Derrick, etc.; Conveyor; Crane.)

Va., Staunton—The Augusta Lime Co., Inc., capital \$10,000, chartered; Robert L. James, Jones Law Bldg., Pittsburgh, Pa.; N. C. Taylor, Staunton.

Miscellaneous Construction

Ala., Mobile—Pier—Alabama State Docks Comsn., Box 304, let contract to Doullut & Ewin, Inc., 306 Q. & C. Bldg., New Orleans, La., and Maehler Bldg., Mobile, for concrete pier No. 2; estimated cost \$1,000,000.*

Fla., Bradenton—Harbor Improvements—City has \$265,000 available for construction of municipal pier, 100 ft. boulevard and yacht basin. Address City Clerk. See Financial News—Bond Issues Proposed.*

Fla., Eau Gallie—City contemplates deepening harbor. Address City Clerk. (See Financial News—Bond Issues Proposed.)

Fla., Fort Lauderdale—Canals—See Land Development.

Fla., Kissimmee—Yacht, Basin—City Comsn. will build yacht basin. See Financial News—Bond Issues Proposed.

Fla., Lake Worth—Incinerator—City Comsn. let contract to Nye Odorless Crematory Co., Georgia Life Bldg., Macon, Ga., for \$5500 incinerator plant; J. H. Mann, Engr.*

Fla., Miami—Bulkheading—See Land Development.

Fla., Miami—Harbor Improvements—City plans expending \$3,150,000 for harbor and water improvements. Address City Clerk. (See Financial News—Bond Issues Proposed.)

Fla., Punta Gorda—Docks—City Comms. authorized survey for new municipal docks, estimated cost \$200,000; The J. B. McCrary Engineering Co., Engrs., Atlanta, Ga.

Fla., St. Petersburg—Harbor Improvements—City, C. M. Blanc, Mayor, plans bond issue for additional port facilities; expend \$235,000 for dredging turning basin to 27 ft., etc.; \$824,000 for concrete pier, 1000 ft. long, 350 ft. wide with slips on either side; \$432,000 for additional warehouse on present pier and providing sheds on new pier; \$86,000 for dredging inner harbor to depth of 27 ft.; Stanley Martin, Director of Finance. (See Financial News—Bond Issues Proposed.)*

Fla., St. Petersburg—Lake—See Land Development.

Fla., Tampa—Channel—See Land Development.

Fla., Tampa—Terminals—City Comsn. approved improvements at a municipally owned water terminals; erect 2-story warehouse on north side of present slip, dredging and dock construction on east side of estuary and smaller warehouse at foot of Jefferson St.; cost of dredging about \$13,000 and dock construction \$56,000; receiving bids; W. Lesley Brown, City Mgr.

Ga., Atlanta—R. J. Spiller, Ponce de Leon Ball Park, plans erecting \$50,000 swimming pool and Turkish baths on Ponce de Leon Ave., 100x250 ft.

La., New Orleans—Board of Comms., Port of New Orleans, will construct coffee dock, concrete; Sam'l Young, Chief Engr., 500 Camp St.

Tex., Dallas—Swimming Pool—Park Board will construct \$65,000 swimming pool, 100x150 ft., fully equipped; open bids about last of January, 1926; Wesley Bintz, Engr., Lansing, Mich.*

Miscellaneous Enterprises

Ala., Mobile—C. L. Hutchinson, Archt., 403 State Office Bldg., receiving bids for \$75,000 building for Mobile Register, 2-story and mezzanine.*

Ala., Mobile—Overalls—Kahn Manufacturing Co., Royan and St. Louis Sts., advises let contract to G. A. Chamberlin & Sons for plant addition; A. L. Downey, Archt., Mobile.*

Ark., Arkansas City—Armour & Co., 208 S. LaSalle St., reported acquired The Kinlin-month Produce Co.'s interests; plan building poultry packing plant, estimated cost \$150,000.

Ark., Leachville—The NuGrape Bottling Co., capital \$12,000, incorporated; P. M. Nelson, O. L. Dreckell.

Fla., Clearwater—Pinellas Electric Blue Print Co., capital \$25,000, incorporated; K. B. O'Quinn, L. B. Martin.

Fla., Clewiston—Clewiston Construction Co. incorporated; H. M. Corse, S. Walcott.

Fla., Cocoa—Building Supplies—Quad Tile Co., Inc., capital \$25,000, chartered; W. D. Joyner, S. G. Owens.

Fla., Coral Gables—Miami Riviera Publish-

ing Co., incorporated; J. D. Montgomery, L. B. Manley.

Fla., Eau Gallie—Edward Taylor, Editor, Melbourne Times, Melbourne, acquired the Eau Gallie Record; will publish.

Fla., Hialeah—Greene Novelty Works, Inc., capital \$10,000, chartered; H. Greene, E. C. McCulley.

Fla., Hollywood—Fry-Thompson Construction Co., capital \$25,000, incorporated; J. H. Fry, R. C. Thompson.

Fla., Madison—Madison Dairy Products Co. plans erecting building cor. Range and Dinkins Sts.; install equipment.

Fla., Maitland—Engineering—Louis L. Coudert, Inc., capital \$100,000, chartered; L. L. Coudert, G. F. Rich.

Fla., Miami—Garalyn Restaurant Co. incorporated; P. V. Patti, C. J. Harper.

Fla., Miami—Magnesia Products—Miami Korkstone Co., J. A. Ross, Pres., reported, acquired site Miami Shores, erect 2-story, 50x100-ft. factory and warehouse; concrete; work started; manufacture tile.

Fla., Miami—Bliscayne Dredging Co., capital \$25,000, incorporated; R. P. Clark, 1628 S. W. Eighth St.

Fla., Miami—Tennessee Egg Co. of Florida, incorporated; H. C. Carbaugh, J. B. Hyde.

Fla., Miami Beach—Homer J. Taylor of E. Liverpool, Ohio, reported establish printing plant; equipment purchased; also open stationery store in conjunction with plant.

Fla., Miami—Standard Plumbing Co., capital \$10,000, incorporated; W. E. Curry, G. T. Saunders.

Fla., Miami—The Barrett Construction Co., capital \$25,000, incorporated; S. J. Glyek, H. M. Greenberg.

Fla., Miami—Building Materials—Standard Concrete Block Co., capital \$25,000 incorporated; Mat N. Rack, E. L. Horn.

Fla., Ocala—Central Florida Morning Times, F. H. Anspacher, Business Mgr., reported will erect modern plant, install equipment capable of printing 32 page paper.

Fla., Ojus—Building Materials—Concrete Tile and Products Co., capital \$50,000, incorporated; Philip Guise, S. B. Lansing.

Fla., Punta Gorda—Printers—The Hayes Corp. chartered; W. K. Hayes, J. U. Ferrell.

Fla., Sarasota—Building Materials—Builders Products Co., capital \$10,000, incorporated; F. Redd, S. B. Gutterson.

Fla., Sarasota—Steamship Line—Moore-McClintic Steamship Co., A. V. Moore, Pres., New Orleans, La., reported, probably establish freight service from New Orleans to Tampa to Sarasota.

Fla., St. Augustine—St. Augustine Tribune, capital \$100,000, incorporated; D. D. Crawford, St. Augustine; Frank Webb, Tallahassee.

Fla., St. Petersburg—Building Materials—Southern Equipment Co., capital \$10,000, incorporated; H. E. Warner, W. I. Talley.

Fla., St. Petersburg—Tell Bakery, Inc., capital \$10,000, chartered; N. E. Tell, I. Fleischer.

Fla., Tampa—J. H. Graham, 2705 Ninth St., will erect \$45,000 bottling plant on Jefferson St.; construction to begin at once.

Fla., Tampa—United States Beef Co., Inc., of Cincinnati, Ohio, reported has tentative plans for \$250,000 abattoir and packing house; acquired 40 acre site on Memorial highway.

Fla., Tampa—Quadrangle Dredging Co., Inc., capital \$500,000, chartered; M. H. Lewis, 55th Ave. near Nebraska.

Fla., Tarpon Springs—Amusements—Pinellas Amusements, Inc., chartered; W. W. Butler, H. Clay Crawford, Jr.

Fla., Vero Beach—J. F. Ball of Vero Beach and Oscar Rufe of Moline, Ill., have plans for erection of laundry building, 1-story; machinery purchased, site acquired.

Ga., Menlo—Menlo Electric Co., capital \$10,000, incorporated; A. A. Miller, Fort Payne, Ala.; W. Bond Collins, Keyser Bldg., Baltimore, Md.

Ga., Savannah—Fire Fighting Equipment—City let contract for hose for fire department to Georgia Supply Co., 32 Bay St., W.; Eureka Hose Co. and J. H. McKenna, 25 York St., W.

Ky., Ashland—T. S. Hope, Nashville, Tenn., and W. L. Young, 817 Broadway, Paducah, Ky., acquired Crescent Dry Cleaning Co., at Twenty-ninth and Central Ave.; will remodel and operate.

Ky., Louisville—Radio and Electrical Supplies—Sun Manufacturing Co. increased capital, \$50,000 to \$100,000.

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Ky., Mayfield—Clothing—Merit Manufacturing Co., Fifth and South Sts., let contract to M. B. Keeling for \$60,000 plant, 4-story, 60x150 ft., brick and steel; install \$10,000 equipment, clothing machinery only; daily output 600 suits.*

La., New Orleans—New Orleans Stamp & Stencil Co., Inc., capital \$50,000, chartered; Gus W. Seifert, 2830 Octavia St.

La., New Orleans—Steamship Lines—Lykes-Steel Florida Line, Inc., capital \$50,000, chartered; Neal M. Leach, 424 Whitley Bldg.

La., New Orleans—Marine Safe Deposit Vault Co., Inc., capital \$500,000, chartered; L. M. Pool, Marine Bank Bldg.

Md., Baltimore—Delicatessen—The Lucullus, Inc., 27 E. North Ave., capital \$50,000, chartered; Chas. E. Malpas.

Md., Baltimore—Distilleries Consolidated, Inc., 1504 Citizens National Bank Bldg., capital \$1,000,000, chartered; Archibald Sykes.

Miss., Biloxi—Cozy Homes Co., capital \$10,000, incorporated; W. J. and George Collins.

Miss., Gulfport—Gulf Construction Co. incorporated; James A. Leathers, Gulfport.

Mo., Excelsior Springs—Elms Hotel Co., capital \$50,000, incorporated; Clinton L. Oliver, Bryon C. Hedges.

Mo., Kansas City—Paper Bags—Snyder & Gray, Inc., chartered; Frank A. Gray, 408 E. Fourteenth St.

Mo., Springfield—Tri-State Amusement Co. incorporated. Roscoe Cox, Enslee Barbour, Landers Orpheum Theater Bldg.

Mo., St. Charles—Undertakers—H. C. Dallmeyer & Sons Co., capital \$50,000, incorporated; H. C. Dallmeyer, Jos. H. Dallmeyer.

Mo., St. Louis—Randazzo Importing Co. incorporated; John L. Randazzo, 4523 Washington St.; manufacture spaghetti, etc.

Mo., St. Louis—Safety Devices—Practical Guard Co., capital \$10,000, incorporated; M. P. Daven, 1435a N. Twenty-fourth St.

Mo., St. Louis—Plumbing Supplies—Peerless Missouri Co., capital 100,000, incorporated; Chas. W. Brinkmann, Jr., 7121 Morgan Ford.

Mo., St. Louis—Oil Burners—The Oil Heat Products Co., incorporated; James G. Doyle, 3830-A Juniata St.

Mo., St. Louis—Cereals—McKenna Co., Inc., chartered; Sylvester J. McKenna, 910 Carlton Bldg.

Mo., St. Louis—H. M. Webster Leather Co., 4359 Duncan St., capital \$75,000, incorporated; H. W. Stanhope, 1018 Federal Commerce Trust Bldg.

Mo., St. Louis—Ehrhardt Bros. Decorating Co., capital \$12,000, incorporated; John Ehrhardt, Jr., 7724 Forsythe St.

Mo., St. Louis—Graybar Electric Co., Inc., incorporated; Daniel D. Farr, 814 Spruce St.

Mo., St. Louis—Paradise Cafe Co., incorporated; Wm. N. Guerdan, 3625 Virginia Ave.

Mo., St. Louis—Bean Construction Co. incorporated; E. V. Bean, F. E. Halsey, 1113 Corby Bldg.

Mo., St. Louis—Manufacturers Fuel Co. incorporated; C. A. Neuman, 7117 Michigan St.

Mo., St. Louis—Garavelli Cafe incorporated; Benj. Garavelli, 3559 Olive St.

Mo., St. Louis—Cigars, etc.—G. C. Dierkes & Co., capital \$10,000, incorporated; G. C. Dierkes, 725 N. Main St.

Mo., St. Louis—Clayton Contracting Co. incorporated; J. G. McKelvey, Denny Rd.

Mo., St. Louis—The Boyer Refrigerator Co., Clifford F. Boyer, Pres., 145 Helfenstein St., leased building at 2217 Locust St. for display rooms and general offices.

Mo., St. Louis—American Syrup & Sorghum Co., capital \$400,000, organized by merger of Fort Smith Sorghum Co., South Fort Smith, Ark., and American Syrup & Preserving Co., 4300 Geraldine St., St. Louis; C. H. Lorenz, Pres.; J. A. Shibley, Sec., both St. Louis; will continue operate plants at South Fort Smith and St. Louis.*

N. C., Ahsokie—Building Supplies—Claude Greene and Archie Browne plan organizing company; will enlarge present building, erect additional warehouses, etc.

N. C., Cooper—Matthews Vending Machine Co., capital \$100,000, incorporated; Cyrus R. Matthews, Daniel A. Matthews.

N. C., Kinston—The Free Press expending between \$15,000 and \$18,000 remodeling building, recently acquired; additional equipment may be purchased.

N. C., Lexington—The Lexington Moving Picture Co., capital \$50,000, incorporated; E. J. Buchanan, Wade H. Phillips.

N. C., Lexington—Furniture—Peacock-Halman Co., capital \$150,000, incorporated; L. J. Peacock, J. A. Lindsay.

N. C., Raleigh—Wilmont Apartments, Inc., capital \$125,000, chartered; Albert L. Cox, Raleigh Bldg. & Loan Bldg.

N. C., Raleigh—North Carolina Home Insurance Co., Geo. P. Folk, Sec., Commercial Bank Bldg., increased capital, \$400,000 to \$500,000.

N. C., Salisbury—National Dyeing & Cleaning Works, Inc., capital \$15,000, chartered; W. G. Alexander, C. T. Harris.

N. C., Wilmington—Farming Implements—Tarheel Corp., Inc., capital \$50,000, chartered; J. P. Herring, Masonboro Rd., Wilmington.

Okla., Bristow—The Blue Diamond Glass Co., Third and Elm Sts., let contract to Gantz Tank Co., Sapulpa, for 30x60-ft. building, steel, concrete or brick, sheet steel roof. (See Machinery Wanted—Automatic Crimping Machines; Chemicals; Sand; Boxes, etc.)*

Okla., Cushing—J. H. Bellis Cotton Co., capital \$75,000, incorporated; J. H. Bellis, A. S. Winget.

Okla., Tonkawa—Rence Clothing Co., capital \$10,000, incorporated; J. F. Murphy, J. C. Prewitt.

Okla., Watts—E. D. Miller, Okmulgee, moved cigar factory to Watts; remodel building, operate.

S. C., Abbeville—McMurray Drug Co., capital \$15,000, incorporated; C. H. McMurray, G. A. Nueller.

S. C., Dillon—Builders' Supply Co., incorporated; O. M. Page, Mgr.

S. C., Greenville—W. W. Kellett acquired The Fountain Inn Tribune; will operate.

Tenn., Cookeville—The Menzies Shoe Co., S. D. Nichols, Pres., of Fon du Lac, Wis., reported establish shoe factory; plans erecting 50x400-ft. building, to be first unit of plant.

Tenn., Elizabethton—Frank Lovette, Greenville, acquired The Carter County Banner; will move into building cor. Main and Elk Sts.; will publish.

Tex., Amarillo—Rainbow Food Products Co., Inc., 512 Tyler St., has new plant; daily output 100 cases.*

Tex., Athens—John O. Mooseburg, Henderson County Agent, installed 12,000 egg capacity incubator; will operate.

Tex., Austin—North American Insurance Co. of Texas, 209 W. Seventh St., capital \$350,000, incorporated; D. K. Woodward, Jr., Pres., Littlefield Bldg., have absorbed assets of the old North American Lloyds; acquired building at Eighth and Congress Ave.; will occupy in probably one year's time.

Tex., Cuero—Crescent Valley Creamery, organized by J. E. Wayne, Pres.; let contract for \$12,000 building, concrete tile, concrete floor, Johns Mansville roof; equipment furnished by Meyers Blaukey Co.; Creamery Package Co., 61 W. Kinzie St., Chicago, Ill., and 1408 W. 12th St., Kansas City, Mo., and York Mfg. Co., York, Pa.*

Tex., Fabens—Palace Mercantile Co., capital \$15,000, incorporated; Milton M. Friedman, Ed. Whitaker.

Tex., Houston—Advertising—S. Deane Wasson Co. incorporated; S. Deane Wasson, Chronicle Bldg.

Tex., Houston—National Good Games Co., Charles Crotty, Pres., 303 Carpenters Bldg., publish games, etc.*

Tex., Ranger—Gholson Hotel Co., capital \$200,000, incorporated; E. C. Walsh, R. L. Burney.

Tex., San Antonio—Pitluk Publishing Co. incorporated; W. D. Scherke, 803 Fulton St.

Tex., San Antonio—J. W. Williamson of Austin reported establish stone finishing plant; install machinery; Atlee B. and Robt. M. Ayers, Archts., Bedell Bldg., San Antonio.

Tex., Wichita Falls—Southern Core Drilling Co., capital \$25,000, incorporated; Geo. Ward, 1605 Ninth St.

Va., Alexandria—Cosmopolitan Hotel Co., Inc., capital \$50,000, chartered; Frank J. Fenwick, Edward W. Minte, both Washington, D. C.

Va., Charlottesville—Poultry Remedies, etc.—Yancey & Co., Inc., 206 Avon St., will erect plant; plans not fully decided; install mixers, packers and grinders. (See Machinery Wanted—Drugs, etc.; Cartons, etc.; Stock and Poultry Supplies.)*

Va., Front Royal—The Shenandoah National Park Hotels, Inc., capital \$20,000, chartered; Charles M. Cott, Columbus, Ohio; A. O. Haley, Front Royal.

Va., Harrisonburg—Shenandoah Shoe Corp., 112 Water St., has building and machinery installed, daily output 300 pairs children's shoes, to be increased to 2800 prs.*

Va., Pulaski—City let contract to American LaFrance Fire Engine Co., Inc., Elmira, N. Y., for additional fire-fighting equipment. Address City Clerk.*

Va., Richmond—Allen & Ginter Branch of the Liggett & Myers Tobacco Co., Inc., 212 Fifth Ave., New York, let contract to Wise Granite & Construction Co., American Bank Bldg., Richmond, for factory addition on Seventh and Canal Sts., 5-story and basement, 130 x 239 ft. 2 in. x 87 ft., reinforced concrete beams and girder construction with enclosing spandrel walls of hard-finished brick, steel frame windows, wire glass; plumbing, heating, wiring, etc., not contracted for; Francisco & Jacobus, Archts., 511 Fifth Ave., New York.*

Va., Staunton—Wearing Apparel—French Fashions, Inc., capital \$25,000 chartered; C. C. French, Wyomissing, Pa.; H. F. Midgely, 1150 Broadway, New York.

W. Va., Huntington—W. L. Wotherspoon, Consist. Engr. of The International Nickel Co., executive offices 67 Wall St., New York, advises: "We have recently placed contracts with Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.; General Electric Co., Schenectady, N. Y., and Allis-Chalmers Manufacturing Co., Milwaukee, Wis., for large amount of electrical machinery; also various rolling mills with E. W. Bliss Co., 53rd St. and Second Ave., Brooklyn, N. Y., and United Engineering & Foundry Co., Farmers' Bank Bldg., Pittsburgh, Pa., in order to take care of increasing demand; consummated contracts with McClintic-Marshall Products Co., 50 Church St., for constructional steel for additional buildings; with Manning, Maxwell & Moore, Inc., 100 E. 42nd St., for necessary electrical cranes; with Ingersoll-Rand Co., 11 Broadway, all New York, for air compressors; with Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., for electric locomotive; with H. K. Ferguson Co. (Constr.), 4200 Euclid Ave., Cleveland, Ohio, for two buildings, approximately 275x65 ft.; in addition are current designing and installing specialized machinery for own special requirements."*

Va., Petersburg—Rainbow Dye Works, Inc., capital \$25,000, chartered; R. G. Butcher, Mutual Bldg., Richmond; L. Johnson, Petersburg.

Motor Bus Lines and Terminals

D. C., Washington—The Capital Traction Co. asks permission to operate motor-bus line on various streets.

Fla., Bradenton—Tri-Cities Rapid Transit Co., Inc., Robert Berg, Pres., has franchise for motorbus line; purchased four \$20 passenger buses, deluxe type, of Graham Brothers.*

Fla., Miami—Southern Transportation, Inc., chartered; W. N. Kaufman, H. W. Singletary.

Ky., Owensboro—Motor Transit Co., Edw. Jones, Sec.-Mgr., 101 Maple St., plans establishing terminals, location to be selected later; buses to be purchased in next sixty days. (See Machinery Wanted—Buses.)*

La., Shreveport—Motor Transit Co., L. T. Waller, Pres., Haynesville, merged with Tri-State Transit Co., W. H. Johnson, Pres., 515 Travis St.; will continue operations.

N. C., Albemarle—Charlotte-Raleigh Bus Line, Inc., capital \$50,000, chartered; W. E. Smith, G. C. McManus; operate passenger bus line from Charlotte to Raleigh via Albemarle, Troy, Carthage, Sanford, etc.*

S. C., Columbia—Carolina Transit Corp. has permit for passenger bus line.

Tex., Dallas—Dallas Railway Co., Richard Meriweather, Gen. Mgr., has permit for bus line extensions; 7 buses required for service; all purchased.

Tex., Sherman—Texas Electric Railway, Dallas, asks permit to establish bus line on certain streets.

Motor Cars, Garages, Filling Stations

Ark., Fort Smith—W. L. Curtis, First Natl. Bank Bldg., has begun construction of building at 211-13 N. Eighth St., 1-story, 50x80 ft.; to be occupied by Hayes & Homan Garage and the Cadillac Agency.

D. C., Washington—Automotive Accessories—Nicholson Sales Co., Inc., capital \$25,000, chartered; J. Banks Nicholson, 1704 P St. N. W.

Fla., Clearwater—Richards Motors, Inc., capital \$10,000, chartered; R. J. Sloman, A. W. Gage.

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Fla., Jacksonville—Ford Motor Co., main office Detroit, Mich., reported let contract to O. P. Woodcock Co., Duval Bldg., Jacksonville, for addition to assembly plant at foot of Wambolt St. on St. Johns River front; concrete dock will be placed under roof for area of 200x321 ft., increasing floor space and working capacity by more than 46,000 sq. ft.; recently acquired 9½ acres on river front adjoining original 10 acre tract to facilitate future expansion; work to begin immediately.*

Fla., Lake Wales—Moffett Motor Co., capital \$50,000, incorporated; J. C. Crawford, J. D. Moffett.

Fla., Leesburg—Leesburg Motor Co. incorporated; Geo. Williams, Harry Ferran; acquired the Butler Motor Co.; will operate.

Fla., Miami—D. L. Shackelford Motor Co., D. L. Shackelford, 3799 N. E. Second Ave., advises have only purchased property and have no plans for building; will probably build at Miami of approximately 250,000 or 300,000 sq. ft.*

Fla., Miami—Federal Truck Co. incorporated; W. A. Dickinson, 229 N. E. 31st St.

Fla., Miami—Day-Elder Motor Sales Co. incorporated; F. L. Hickling, J. F. Nixon.

Fla., Pensacola—Pensacola Nash Co., capital \$25,000, incorporated; F. Gilmore, Sr., V. J. Vidal.

Fla., Pensacola—Automobile Accessories—Brock & Yaste, Inc., capital \$50,000, chartered; P. H. Brock, Guy Yaste.

Fla., St. Petersburg—St. Petersburg Motors Co., T. M. Kelley, Gen. Mgr., 264 Second Ave. S., reported, contemplates building 3-story garage on Third St. and Fourth Ave., containing about 40,000 sq. ft. floor space; estimated cost \$250,000; M. Leo Elliott, Archt.

Ga., Atlanta—Gulf Refining Co., Metropolitan Bldg., will erect filling station.

Ky., Henderson—Cottingham Motor Co., capital \$50,000, incorporated; L. A. Cottingham, C. D. Cottingham.

Ky., Russellville—H. B. Scoggins Motor Co., increased capital, \$15,000 to \$30,000.

Md., Hagerstown—The M. P. Moller Motor Car Co., capital \$1,000,000, incorporated; Mathias P. Moller, Mathias P. Moller, Jr.

Miss., Canton—Canton Motor Co., capital \$10,000, incorporated; J. A. Beavers, S. G. Loeb.

Miss., Natchez—Independent Oil Co., Joseph Zucaro, Mgr., acquired site cor. Pine and Franklin Sts.; will erect drive-in filling station, with complete garage and machine shop; brick and stucco, multi-colored tile roof.

Mo., Carthage—Harmon Oil Co., L. B. Harmon, Pres., 208 N. Maple St., will erect 60x70-ft. filling station on Fourth and Maple Sts.; soon open bids; install garage equipment, gas pumps, oil drums, etc.; receive bids Jan. 15, 1926. (See Machinery Wanted—Garage Equipment; Pumps, etc.)*

Mo., Joplin—Empire Sales Co., 308 Wall St., will erect \$20,000 automobile service station at Third and Joplin Sts.; 2-story, 50x120-ft., brick and stucco, concrete floors, part tile roof, metal ceilings, metal doors, steel sash and trim, plaster board, rubber tile, ventilators; receive bids about Jan. 15; install about \$5000 equipment; F. E. Martinie, Archt.

Mo., Kansas City—Automobile Accessories—Falls Rubber Products Co., capital \$40,000, incorporated; T. Polhemus, 528 East Sixty-fifth St.

N. C., Durham—Nash Motor Co., Duke St., let contract to A. H. and T. H. Lawrence Co., Geer Bldg., at 12.295 for addition to garage building; Milburn, Heister & Co., Archts., Union Savings Bank Bldg, Washington, D. C.*

Okla., Grove—The Kelso Service Co. plans building filling station, stucco and tile; first of chain of filling stations to be erected in Eastern Oklahoma; Geo. Lancaster of Ketchum, Archt. and probably Contr.

Okla., Oklahoma City—Reinhart & Donovan (Contra.), reported having plans made for 7-story building used for automobile hotel, estimated cost \$250,000; capacity 400 machines.

Okla., Stigler—Lantz Motor Co. will erect \$20,000 garage, 75x130 ft., brick, concrete floors, composition roof, install \$8000 equipment, including show cases, counters; parts bins; heating plant, steam cleaning plant, overhead track; open bids about Feb. 1; M. L. Hardin, Archt., Equity Bldg., Muskogee. (See Machinery Wanted—Building Materials; Ventilators; Pumps (Oil); Heating Plant; Elevator; Builders Hardware.)*

Tenn., Chattanooga—J. H. Alday Motor Co., 708 McCalla Ave., capital \$35,000, incorporated.

Tenn., Chattanooga—Collins-George Motor Co., capital \$25,000, incorporated; Lee Collins, A. C. George.

Tex., Houston—Vaughn Auto Supply Co., 1717 Main St., increased capital, \$15,000 to \$25,000.

Tex., San Antonio—Cleveland Motor Sales Co. incorporated; T. W. Wheeler, 502 University St.

Tex., Walnut Springs—Bosque Motor Co., capital \$20,000, incorporated; G. R. Lay, R. L. Rush.

Railways

W. Va., Hartland—Middle Creek Railroad Co., chartered to build a line from Hartland to Greendale, W. Va., about 10 mi., five miles being already built southward from Hartland. Capital stock \$25,000. Incorporators: James A. Ryan, New York, N. Y.; U. S. Perry, New Brighton, Staten Island, N. Y.; John F. Reilly, New York, N. Y.; H. M. Hassell, Boonton, N. J.; Alfred B. Triggs, Brooklyn, N. Y.

Railway Shops and Terminals

Tenn., Knoxville—Southern Railway System, 1300 Pennsylvania Ave., Washington, reported let contract to J. M. Dunn & Sons, Broadway and Depot, Knoxville, for rebuilding planing mill for yard.*

Roads, Streets and Paving

Proposed Construction

Ala., Jasper—City plans paving 5 streets, including Mulberry, China. Address City Clk.

Ala., Wetumpka—City, J. Bruce Airey, Mayor, receives bids Jan. 19 for 26,000 sq. yds. sheet asphalt, bitulithic, asphaltic concrete and concrete streets; 2000 lin. ft. combined curb and gutter, storm sewers, etc.; plans on file, and from Robert L. Totten, Inc., Conslt. Engr., Brown-Marx Bldg., Birmingham.

Ark., Fort Smith—City, Earl Henderson, Clk., plans opening South Seventh, Eighth, Tenth and Twelfth Sts., Garrison to Rogers Ave., cost \$500,000; J. H. Parke, Mayor. See Financial News—Bond Issues Proposed.

Ark., Harrisburg—Ozark Trails Commrs., C. T. Carpenter, Atty., Marked Tree, plans completing graveling 26 mi. road, connecting Deckerville, Tyronza, Marked Tree and Earle, cost \$135,000. (See Financial News—Bond Issues Proposed.)

D. C., Washington—Dist. Commrs. contemplate widening First St. N. E., between G and Myrtle.

D. C., Washington—Dist. Planning Committee contemplates opening Montana Ave., connecting Rhode Island Ave. N. E., and Bladensburg road.

Fla., Bartow—Polk County Commrs. plan 20-ft. road and 66-ft. right-of-way, from Lakeland to Hillsborough County line.

Fla., Boca Raton—See Land Development.

Fla., Dania—See Land Development.

Fla., Eau Claire—City Commrs. plan street grading and paving; cost \$25,000. See Financial News—Bond Issues Proposed.

Fla., Jacksonville—See Land Development.

Fla., Lake City—Columbia County plans road building; cost \$500,000; J. L. Markham, Clk. Circuit Court. See Financial News—Bond Issues Proposed.

Fla., Miami—See Land Development.

Fla., Miami—City, H. E. Ross, Clk., receives bids Jan. 25 for 45,243 sq. yd. concrete sidewalks, in Sidewalk Improvement Dist. 63 and 64; street paving and storm sewers in Highway Improvement Dist. 273 and 304, 565,692 sq. yd. grading; 565,691 sq. yd. 5-in. and 8-in. pit rock base, and 2-in. and 3-in. sheet asphalt, 269,666 lin. ft. concrete curb and gutter; plans from Ernest Cotton, Director of Public Service.

Fla., Miami—City Commrs. plan widening and paving streets, cost \$3,200,000; 5 bridges, cost \$2,150,000. See Financial News—Bond Issues Proposed.)

Fla., Orlando—See Land Development.

Fla., Orlando—City Comm. considering boulevard around Rock Lake.

Fla., Palm Beach—See Land Development.

Fla., Pensacola—See Land Development.

Fla., St. Petersburg—See Land Development.

Fla., Sebring—See Land Development.

Fla., Tampa—See Land Development.

Fla., Vero Beach—City, H. G. Redstone, Clk., receives bids Jan. 28 for 51,240 lin. ft. 5-ft. sidewalks; plans from Carter & Damerow, Engrs., Vero Beach; B. T. Redstone, Mayor.

Fla., Winter Garden—City, Al Thomas, Asst. City Clk., plans boulevard around Winter Garden shores.

Fla., Winter Park—See Land Development.

Ga., Adel—Cook County Commrs. plan paving National Highway through county; B. Powell, Commr.

Ga., Eatonton—Putnam County Commrs. plan paved roads. See Financial News—Bond Issues Proposed.

Ga., Rome—City Comm. plans street paving; Robert & Co., Municipal Engrs., Atlanta. (See Financial News—Bond Issues Proposed.)

Ga., Summerville—See Bridges, Culverts, Viaducts.

Ga., Valdosta—Lowndes County Commrs. plan improving State Highway Route No. 38, east and west through county.

Ga., Waycross—Ware County Commrs. plan hard-surfacing 6 roads: 18 mi., Waycross to Bacon County line; part of Central Dixie Highway; 7 mi., Waycross to Wanesboro; 16 mi., Millwood to Atkinson County line; 2 mi., Waycross to Pierce County line; 4½ mi., County portion of Waycross-Brunswick highway.

Louisiana—Louisiana Highway Comm., Baton Rouge, receives bids Jan. 26 for 2 roads: Catahoula Parish, 8.49 mi. gravel, Jena-Jonesville Highway, end of gravel road in Jonesville, to point about 1½ mi. east of Archie; St. Landry Parish, .72 mi. gravel, Opelousas-Villa Platte Highway, from intersection Railroad Ave. and Missouri Pacific Ry., Opelousas, to gravel road, leading to Villa Platte, at Southern Pacific Ry. crossing; plans on file; W. B. Robert, State Highway Engr. (See Machinery Wanted—Gravel.)

La., Baton Rouge—East Baton Rouge Parish Police Jury, F. A. Woods, Sec., receives bids Jan. 12 for gravel Highland road, Road Dist. No. 6, from end of gravel to Wards Creek Bridge, Ratlin Bridge.

La., Baton Rouge—East Baton Rouge Parish Police Jury received low bid from Young & DeBritton, at \$15,160 for sub-grades and bridges in Istrouma; from Denham & Loudon, to gravel Sullivan road.

La., Benton—Bossier Parish Police Jury plans three 18-ft. concrete roads and 8 gravel or other improved roads: 13 mi. Bossier City-Benton; 13 mi. Bossier City-Creighton; 11 mi. Bossier City-Minden; 22 mi. Benton to Arkansas line; 16 mi. Plain Dealing to Sarepta; 15 mi. Benton to Bellevue; 26 mi. Bellevue to McDade; 3 mi. oil field lateral roads; 3 mi. Koran lateral road; 20 mi. Hughes Spur to Cotton Valley; 7 mi. Bollinger to Red River; cost \$1,500,000. See Financial News—Bond Issues Proposed.

Md., Baltimore—Board of Awards received low bid from Development & Construction Co., American Bldg., to grade Calvert, Aisquith and Taylor Sts.; Howard W. Jackson, Mayor.*

Md., Towson—Baltimore County Commrs., John R. Haut, Ch. Clk., contemplate opening Pittsburgh Ave., Twelfth Dist., from Dundalk to Turnpike Station, cost \$40,000.

Miss., Gulfport—See Land Development.

Miss., Holly Springs—Marshall County Board of Suprvs. receives bids soon for 2.2 mi. gravel road, between Holly Springs and Oxford, from Abbeville to Malone; estimated cost \$30,000.

Miss., Jackson—Hinds County Board of Suprvs. receives bids Jan. 13 for 7.251 mi. State trunk road, between Jackson and Hazlehurst, 60,357 cu. yds. common and borrow excavation, 32,051 lbs. reinforcing steel in culverts; plans from H. C. Dietzer, State Highway Engr., and Chancery Clk., Jackson.

Miss., Laurel—Jones County Board of Suprvs. receives bids soon for 2 mi. gravel road in southern part of Beat 4.

Mo., St. Joseph—City plans grading Twenty-fourth St., Lafayette St. to alley between Lafayette and Seneca. Address City Clerk.

Mo., St. Louis—Board of Public Service plans widening and straightening Vandeventer Ave., 65 to 95 ft., between Market St. and Chouteau Ave.

Mo., Webb City—City plans paving Second St., Main to Connell Ave. Address City Clk. See Financial News—Bond Issues Proposed.

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.

N. C., Asheville—See Land Development.
N. C., Durham—City, H. W. Keuffner, Director of Public Works, plans expending about \$1,000,000 to pave about 12 mi. streets; 220,000 sq. yd.; bids open in Feb.

N. C., Hendersonville—Hendersonville County Board of Trustees, John Ewbanks, Sec., receives bids Jan. 11 to grade Hendersonville-to-Greenville Highway, Tuxedo, N. C., to Greenville, S. C.

N. C., Murphy—See Land Development.

N. C., Swannquarter—Hyde County and State Highway Comm., Raleigh, plan 3 roads: In Hyde County; concrete road from Swannquarter to Leachville; from Englehard to Dare County line, cost \$300,000. Address County Comms.

S. C., Charleston—City, Thomas P. Stoney, Mayor, plans paving with sheet asphalt, Meeting St., Broad to Calhoun.

Tenn., Athens—McMinn County and State Dept. of Highways, Nashville, let contract in Feb. for highway, Etowah to Monroe County line. See Financial News—Bond Issues Proposed.

Tenn., Bolivar—Hardeman County and State Dept. of Highways, Nashville, plan improving state road between Bolivar and Selmer.

Tenn., Chattanooga—See Land Development.

Tenn., Chattanooga—City Comm. plans extending Broad and Eleventh Sts.; cost \$325,000. Address Mayor Hardy. See Financial News—Bond Issues Proposed.

Tenn., Johnson City—See Land Development.

Tenn., Lafayette—Macon County and State Highway Dept., Nashville, plan 14 mi. road, between Lafayette and Westmoreland.

Tenn., Nashville—Davidson County Highway Dept. plans improving County road, Bellevue to Linton.

Tenn., Union City—Dept. of Highways and Public Works, Nashville, plans highway between Union City and Fulton; T. C. McEwen, Div. Engr., Jackson.

Tex., Alice—City plans street paving and improvements, cost \$50,000. Address The Mayor. See Financial News—Bond Issues Proposed.

Tex., Angleton—Brazoria County, J. T. Loggins, County Judge, received low bids from Haden & Austin, Santa Fe and Runnels Sts., Houston, for 2 roads: 6.59 mi. State Highway No. 19, Angleton to Bonnie, \$55,436 for limestone, \$60,263 for trap rock, \$59,458 limestone and trap rock; 10.88 mi. State Highway No. 19, \$92,885, limestone surface; \$100,000, trap rock; \$99,525, limestone and trap rock.*

Tex., Breckenridge—Stephens County, J. W. Hill, County Judge, received low bid from L. W. Pelphrey & Co., Breckenridge, for grading, drainage structures, sledged stone base and bituminous top on 2 roads: 16.82 mi. Breckenridge to Throckmorton County line, \$488,185; 17.760 mi. State Highway No. 67, \$420,846.*

Tex., Brownsville—Cameron County, Oscar C. Dancy, County Judge, plans receiving bids about April 1 for 2 1/2 mi. grading and structures on State Highway No. 100, Barreda to Point Isabel; W. O. Washington, County Engr.*

Tex., Cameron—Milam County, Jeff T. Kemp, County Judge, plans 15.06 mi. grading and bridges on State Highway No. 43; A. F. Mitchell, County Engr.

Tex., Canyon—City, C. M. Harrison, Mayor, plans street paving. See Financial News—Bond Issues Proposed.

Tex., Cleburne—City, W. H. Goldsmith, Mayor, plans paving S. Willhite, Wardville, Mill St., approximate cost \$60,000; C. H. Teesdale, City Engr.

Tex., Edinburg—Hidalgo County, A. W. Cameron, County Judge, plans highway improvement; cost \$3,500,000. See Financial News—Bond Issues Proposed.*

Tex., Gainesville—City, F. M. Savage, Sec., plans paving business and residential streets, approximate cost \$60,000.

Tex., Galveston—Galveston County, E. B. Holman, County Judge, plans 5 mi. concrete pavement on State Highway No. 6, Galveston-Houston road, north from Galveston; R. C. Washington, County Engr.

Tex., Gatesville—City, Fred C. Prewett, Sec., received low bid from Wiley & Tucker, Gatesville, for plain concrete paving and Panhandle Construction Co., Lubbock, for brick top and gravel base paving.*

Tex., Gilmer—City, L. G. Martin, Sec., receives bids after Jan. 1 for 20,000 yds. pav-

ing; Municipal Engineering Co., Conslt. Engr., 602 Praetorian Bldg., Dallas.

Tex., Gonzales—Gonzales County, J. C. Roubert, County Judge, plans 8.08 mi. sledged stone base, bituminous topping, on State Highway No. 51, Smiley to Wilson County line, estimated cost \$133,000; J. G. Irby, County Engr.

Tex., Goose Creek—City plans surfacing streets with shell, cost \$16,500. Address The Mayor. See Financial News—Bond Issues

Tex., Grand Prairie—Board of Comms., G. H. Turner, Mayor, receives bids Jan. 8 for street improvements; plans from Koch & Fowler, Conslt. Engrs., 606 Central Bank Bldg., Dallas.

Tex., Hallettsville—Lavaca County, C. I. Stavinoka, County Judge, receives bids Jan. 25 for 8-in. crushed limestone rock topping, finished with 1/2-in. Uvalde rock asphalt, on highway from Fayette County line, south to Schulenburg, to Sweet Home, via Hallettsville.

Tex., Houston—City, O. F. Holcombe, Mayor, received low bid from Scott Shambaugh, 203 Larendon Bldg., at \$51,497, to pave Clay Ave., Austin to St. Emanuel St.

Tex., Huntsville—Walker County, A. T. McKinney, County Judge, plans 17.27 mi. grading and bridges on State Highway No. 45; estimated cost about \$110,000; D. K. Caldwell, County Engr.

Tex., Karnes City—Karnes County, Runge Road Dist., D. O. Klingeman, County Judge, plans hard roads, cost \$225,000. See Financial News—Bond Issues Proposed.*

Tex., Lubbock—Lubbock County, Chas. Nordyke, County Judge, plans 14.95 mi. caliche, State Highway No. 70; estimated cost \$100,000; B. K. Garrett, County Engr.

Tex., Memphis—City plans paving 40 blocks streets in residential and business streets, cost \$50,000. Address The Mayor. See Financial News—Bond Issues Proposed.*

Tex., Menard—City plans graveling streets. Address The Mayor.

Tex., Palestine—Anderson County plans .91 mi. grading and bridges, State Highway No. 43-A; Edw. W. Davis, County Engr.

Tex., Raymondville—Willacy County, W. H. Mead, County Judge, plans Bates type or reinforced concrete surfacing on road from Cameron County line to Brook County line; estimated cost \$3,000,000; J. E. Johnson, Orange.

Tex., San Angelo—City Comm. receives bids in Jan. to pave about 12 blocks streets.

Tex., Seymour—Baylor County, Nat. G. Mitchell, County Judge, plans 20.58 mi. grading and bridges on State Highway No. 24; J. G. Rollins, County Engr.

Tex., Timber Mountain—P. O. Toyahvale, (See Water Works.)

Tex., Waxahachie—Ellis County plans .87 mi. grading and bridges, State Highway No. 34; W. A. Spalding, County Engr.

Tex., Wharton—City, John Blain, Sec., plans paving streets with permanent type paving, cost \$85,000; B. S. King, City Engr. See Financial News—Bond Issues Proposed.

Va., Fort Myer Heights—State Highway Comm., Richmond, allocated \$1,000,000 toward improving Richmond-Washington Highway, Alexandria to North Anna River, 25 mi. north of Richmond.

Va., Petersburg—State Highway Dept., Richmond, plans paving section of road between present highway and sidewalk on Colonial Heights approach to Appomattox Bridge.

W. Va., Dunbar—City plans paving various streets, including Dunbar Ave. Address City Clk.

Contracts Awarded

Alabama—State Highway Comm., Montgomery, let contracts for 3 roads: Butler County, 8.6 mi. gravel surfacing, between Greenville and Pineville, Nixon & Phillips, Lineville, \$35,955; Clay County, 6.3 mi. gravel surfacing, between Ashland and Lineville, Nixon & Phillips, \$39,955; Morgan County, 9.32 mi., between Decatur and Moulton, J. W. Gwin, Hamilton Station, Birmingham, \$228,614.*

Ala., Moulton—State Highway Dept., Montgomery, let contract to J. W. Gwin, Age-Herald Bldg., Birmingham, at \$228,000, for 9.2 mi. Moulton-Decatur Highway, Moulton, Lawrence County, to Decatur, Morgan County.

Ark., Van Buren—State Highway Dept., Little Rock, and Crawford County Highway Dept. will build Pickett Hill road and connecting road from Kibler road to Van Buren

end of Alma-Van Buren State Highway; R. S. Wilson, County Judge.

Fla., Bradenton—City, L. L. Hine, Clk., let contract to N. J. Trussell, at about \$10,571, for additional sidewalks.*

Fla., Bonifay—State Road Dept., Tallahassee, let contract to E. P. Toulmin, Toulminville, Mobile, Ala., for grading and small drainage structures on Road No. 1, Holmes County.

Fla., Vernon—E. P. Tomlin, Mobile, Ala., awarded contract at \$120,000, for road from Chipley to Bonifay.

Ga., Waycross—City let contract to D. W. Morgan, Waycross, for curbing Satilla Blvd., Cherokee Heights subdivision.

Louisiana—Louisiana Highway Comm., Baton Rouge, let contracts for 2 roads: Tangipahoa Parish, 8.802 mi. Hammond-New Orleans highway, W. C. Perry, Baton Rouge, \$88,044; Orleans Parish, surface Chef Menteur highway, Chef to Rigolets, J. Devereaux O'Reilly, Hibernia Bldg., New Orleans, \$20,000.*

La., Alexandria—Louisiana Highway Comm., Baton Rouge, let contract to A. G. Pringle, Glenmora, at \$11,019, to straighten and improve Jefferson Highway, Alexandria to Lecompte.*

Mo., Cape Girardeau—McGeorge Construction Co. awarded contract to gravel Capaha Drive, near Cape Rock, and pave Mill St., Main to Fountain.

N. C., Asheville—Buncombe County Highway Comm. let contract to Pruitt & Jamison to pave Cedar Springs road.

Okla., Cushing—City let contract to Galimore Construction Co. to pave 6 blocks on S. Harrison St. Address City Clk.

Tex., El Paso—El Paso County, E. B. McClintock, County Judge, let contract to Jas. W. Morgan, 319 Texas St., at \$15,136, for .68 mi. grading and 2 concrete siphon culverts, and reinforced concrete slab bridge across Franklin Irrigation Canal.*

Tex., McKinney—Collin County let contract to L. B. Everett, McKinney, at \$26,368, for 13.9 mi. gravel-surfacing on Highway No. 39, Frisco-Denton road, from 3 mi. south of McKinney to McKinney-Frisco Dist. line.*

Tex., Waco—City, E. E. McAdams, Mgr., let contract to Standard Paving Co., 524 Provident St., at \$32,857, to pave N. Twelfth and Austin St.; at \$3.25 per yd. for brick paving on alley.

Va., Fort Myer Heights—Arlington County let contract to Loomis-Wetzel Construction Co., Washington, at \$26,767, to build Frazier Ave., from Alexandria and Washington road to Mount Vernon Blvd.

Sewer Construction

Ala., Northport—City voted sewer bonds. See Financial News—Bond Issues Proposed.

Ala., Wetumpka—See Roads, Streets, Paving.

D. C., Washington—District Comms. let the following contracts for seven service sewers: to Adam McCandish Co., 1215 Harvard St. N. W.; Kirwan Engineering Co., 1308 E. Baltimore St., Baltimore, Md.; G. B. Mullin, 1296 Unshur St. N. W., Washington; Wm. A. Pate, Jr., Rockville, Md.

Fla., Dania—See Land Development.

Fla., Eau Gallie—City will install sewer system. See Financial News—Bond Issues Proposed.

Fla., Jacksonville—See Land Development.

Fla., Kissimmee—City contemplates sewer improvements. See Financial News—Bond Issues Proposed.

Fla., Miami—City, H. E. Ross, Clk., receives bids Jan. 25 for storm and sanitary sewers in Sewer Improvement Districts 146-A, 159, 165 to 167, 168 to 179, 180 and 181, 183 and 184, including terra cotta sewers, cast iron sewers, Standard manholes, castings, etc.

Fla., Orlando—See Land Development.

Fla., Palm Beach—See Land Development.

Fla., Pensacola—See Land Development.

Fla., Stuart—City will readvertise for bids for sewer work. Richard F. Ensey, City Engr.

Fla., Tampa—See Land Development.

Fla., Winter Park—See Land Development.

Md., Baltimore—Board of Awards, Milton J. Ruark, Sewerage Engr., receives bids Jan. 13 for storm drains and sanitary sewers in Sewer District J-4. (See Machinery Wanted—Sewers.)

Md., Baltimore—See Land Development.

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Miss., Gulfport—See Land Development.

N. C., Durham—City Council let following contracts for sewer work: To Pacific Flush Tank Co., 149 Broadway, New York, for 70 siphons; to Carolina Foundry & Machine Co., 610 Chestnut St., Winston-Salem, for 370 manholes, covers and dust pans; to Pomona Terra Cotta Co., Pomona, N. C., for pipe; to Concrete Pipe & Products Co., Richmond, Va., for 1 carload 8-in. concrete pipe; Hughes & Keegan, Richmond, Va., has contract for construction.*

Okla., Oklahoma City—City, Warren E. Moore, will construct 2 sewage disposal plants and intercepting sewer; cost \$95,000; install Imhoff tanks and intercepting sewers; will purchase valves, pipes; Pearce, Greeley & Hansen, Engrs., 6 N. Michigan Bldg., Chicago, Ill.*

Tenn., Johnson City—See Land Development.

Tex., Abilene—City Comsn. let contract to R. J. Estep & Co., Wilson Bldg., Dallas, for sewer construction: To San Antonio Sewer Pipe Works for sewer pipe; to American Cast Iron Pipe Co., Birmingham, Ala., for water pipe; rejected bids for construction of water purification plant.*

Tex., Kemp—See Water Works.

Tex., San Antonio—McKenzie Construction Co., Travis Bldg., has contract for sewer line under Apache Creek at San Marcos St.*

Tex., Timber Mountain, P. O. Toyahvale—See Water Works.

Tex., Waco—City receives bids March 15 for activated sludge type of sewage disposal plant; V. G. Koch, City Engr.

Tex., Wellington—City will probably vote on bonds for sewer system; C. B. Myers, City Sec.

W. Va., Charles Town—City Council considering installation of sewer system.

Telephone Systems

Fla., Pensacola—Southern Bell Telephone & Telegraph Co., main office Atlanta, Ga., will expend approximately \$278,800 on erection of new building on Palafox St., installing new equipment and extensions to present system; also use about \$61,200 of the allotment for 1926 in St. Augustine.*

Ga., Atlanta—Southern Bell Telephone & Telegraph Co., 15 Dey St., reported plans expending \$33,300,000 for additions, extensions and replacements during 1926; of that amount use \$4,406,000 for Alabama, \$9,599,000 for Florida, \$3,429,000 for Louisiana, approximately \$2,500,000 each in Georgia, N. Carolina, Kentucky and Tennessee, and about \$1,000,000 included for Mississippi and S. Carolina.

Ky., Carlisle—Nicholas Home Telephone Co. and The Cumberland Telephone & Telegraph Co., main office Atlanta, Ga., consolidated; begun work on exchange building, installing complete office equipment.

La., Monroe—Cumberland Telephone & Telegraph Co., J. W. Warren, group Mgr., 509 Stubbs St., will expend \$212,000 during year 1926; building on Gramont and Catalpa St. will be completed about Feb. 1, 1926, and installation of equipment will require about 6 months.*

La., Shreveport—Cumberland Telephone & Telegraph Co., Atlanta, Ga., reported, contemplates spending approximately \$1,203,000 during year 1926 for new building and machine switching central office equipment.

N. C., Greensboro—Southern Bell Telephone & Telegraph Co., Atlanta, Ga., contemplates extending service to Sedgewick, Inc., development, estimated cost \$38,000.

S. C., Greenville—Southern Bell Telephone & Telegraph Co., Atlanta, Ga., begun construction of line to Caesar's Head Mountain; estimated cost \$50,000.

Tenn., Knoxville—Cumberland Telephone & Telegraph Co., E. F. Garrett, Dist. Mgr., main office, Atlanta, Ga., will probably expend about \$221,000 for new construction and expansion for year 1926; consist largely of new local and toll switchboard, underground and aerial construction and expenditures for state during 1926 will be approximately \$2,762,000 for additions and replacements.*

Tex., San Angelo—San Angelo Telephone Co., John Y. Rust, Pres., will erect \$100,000 exchange building on W. Twigh Ave., 3-story, 75x190-ft. fireproof structure.

Va., Norfolk—Chesapeake & Potomac Telephone Co., main office 5 Light St., Baltimore, Md., will expend approximately \$23,000 for extension of cables in northwestern section, in Ballentine Place and placing of poles, cross-arms, etc., on lines to Virginia Beach and Cape Henry; J. C. Brown, local Mgr.

W. Va., Clarksburg—Chesapeake & Potomac Telephone Co. of West Virginia, A. E. Berry, Pres., will expend approximately \$15,000 on improvements to Wheeling-Clarksburg and Wheeling-Parkersburg lines.

Textile Mills

Ala., Gadsden—Jack Chitwood, Fort Payne, reported has contract for Davis and Allcott Co.'s hosiery mill; 60x182 ft.; brick and concrete construction.

Ark., Monticello—Stockholders of Monticello Cotton Mills reported ratified merger with Monticello Cotton Mills Co., J. G. Williamson, Pres.; reported to take over and operate mill, construct additional buildings, install machinery, electrify plant; add 4500 spindles; Lockwood, Greene & Co., Boston, Mass., Engrs.

Ga., Woodbury—A. D. Jones, Woodbury, John Baugh, Hogansville, reported interested in organizing company to construct cotton mill.

N. C., Burlington—Southern Dyeing Co., E. W. Sweet, Pres., has building with daily capacity 6000 lbs. of dyed yarn; will install 12 dye vats and 4 Franklin machines at once, with plans for enlargement; later may erect building.*

N. C., Charlotte—Scandinavia Belting Co., 226 High St., Newark, N. J., Wm. A. Schriber, Sec. and Mgr., let contract to Southeastern Construction Co., 210 W. Second St., Charlotte, for \$100,000 plant for manufacture of woven cotton belting; one 1-story building, 156x138 ft.; one-story, saw-tooth roof construction, with boiler house, for two H.P. boilers attached; boiler house extension 20x35 ft.; brick walls, steel frame, steel side wall sash, 3-in. plank roof, double glazed saw-tooth sash, set in sheet metal fittings; floors throughout reinforced concrete; roofing, 1-in. cork insulation, with asphalt roofing material. Lockwood, Greene & Co., Inc., Engrs., 100 E. 42nd St., New York; boilers will be new 50 H.P. brick set, H.R.P. boilers; plans and specifications for sprinkler system, heating system are now being prepared; manufacturing equipment will be brought from present plant now at Paterson, N. J., and reinstalled in new building.*

N. C., Lexington—R. P. Earnhardt, Sec. of Wabena Mills, Inc., reported interested in organization of company to establish lace mill.

S. C., Anderson—James P. Gossett, S. H. Lander and associates reported to apply for charter with \$200,000 capital; erect plant for manufacture of Lad Lassie cloth; install 300 looms; J. E. Sirrine & Co., Greenville, Archts.

Tex., Sherman—Pool Knitting Mills, Carl Pool, Pres., plans establishing mill with daily capacity 100 doz. men's hosiery; install \$10,000 machinery; electric power plant.*

Va., Bedford—Bedford Woolen Co., Inc., Morgan P. Hunter, Pres., increased capital.

Water Works

Ala., Attalla—Alabama Water Co. reported has site at Eighth Ave. and 3d St. for 500,000 gal. water reservoir; construct pumping station, lay mains; expend \$76,000.*

Ala., Tuscaloosa—Water Works Comsn. receives bids Jan. 26 for gunting clear water well, wash water tank and distribution reservoir. (See Machinery Wanted—Gunting.)

Fla., Boca Raton—See Land Development.

Fla., Dania—See Land Development.

Fla., Eau Gallie—City will construct water-works system. See Financial News—Bond Issues Proposed.

Fla., Jacksonville—See Land Development.

Fla., Jacksonville Beach—City received low bid from J. B. McCrary Co., Atlanta, Ga., for water works system.

Fla., Kissimmee—City Comsn. plans water extensions. See Financial News—Bond Issues Proposed.

Fla., Orlando—See Land Development.

Fla., Palm Beach—See Land Development.

Fla., Pensacola—See Land Development.

Fla., Sebring—See Land Development.

Fla., Tampa—See Land Development.

Fla., Tampa—City will probably extend water-works system to newly annexed territory. Address The Mayor.

Fla., West Palm Beach—West Palm Beach Water Co., Malcolm Pirnie, reported to expend \$1,000,000 in improvements and expansions.*

Fla., Winter Park—See Land Development.

Md., Pikesville, Branch Baltimore—Comms. Baltimore County, Metropolitan Dist., Courthouse, Towson, receives bids Jan. 25 for water mains and appurtenances in Pikesville. (See Machinery Wanted—Water Mains.)

Miss., Gulfport—See Land Development.

Miss., Oklahoma—City, A. C. Rowe, Clk., receives bids Feb. 5 for steel stand pipe. (See Machinery Wanted—Stand Pipe.)

N. C., Asheville—Hazel Water Co., capital \$50,000, incorporated; C. E. Case, F. P. Rymer.

Okla., Altus—City will extend water works. See Financial News—Bond Issues Proposed.

Tenn., Johnson City—See Land Development.

Tex., Abilene—See Sewer Construction.

Tex., Canyon—City will vote on bonds. See Financial News—Bond Issues Proposed.

Tex., Fort Worth—City reported let the following contracts for water works improvements: U. S. Cast Iron Pipe & Foundry Co., Magnolia Bldg., Dallas, for DeLavaud pipe; American Cast Iron Pipe Co., Praetorian Bldg., Dallas, for Class B or DeLavaud pipe; Rennselaer Valve Co., Troy, N. Y., for valves; Barney Smith Machinery Co., Joseph Bldg., Fort Worth, for Vogt valves; Rennselaer Valve Co. for Corey fire hydrants.*

Tex., Frost—Municipal Excavating Co., 800 N. Crawford St., Dallas, reported has contract for constructing water-works pipe line; Smith & Whitney, 230 Commerce St., Dallas, contract for pumping equipment, Chicago Bridge & Iron Co., Praetorian Bldg., Dallas, contract for tank and tower.*

Tex., Hedley—City reported let contract to Joe B. Winslett, 1001½ Main St., Dallas, for water works system; Devlin Engineering Co., 119 Central Bldg., Amarillo, Const. Engr.*

Tex., Kemp—Following reported low bidders on water works and sewer improvements: W. H. Cramer, 3710 Oak Grove St., Dallas, for water and sewer lines; Southern Engine & Pump Co., 615 Washington St., Houston, for tank and water tower; W. P. O'Connor, Preston Rd., Dallas, for surface reservoir; Koch & Fowler, 606 Central Bank Bldg., Dallas, Engrs.*

Tex., Port Arthur—City, J. P. Logan, Mayor receives bids Jan. 21 for water purification plant. (See Machinery Wanted—Water Purification Plant.)

Tex., Timber Mountains, P. O. Toyahvale—Timber Mountains Development Corp., Lee I. Starling, Pres., 310 Fidelity Union Bldg., Dallas, reported planning construction of complete water works system, sewer system and disposal plant and native stone road; Koch & Fowler, Engr., 606 Central Bank Bldg., Dallas.

Tex., Wellington—Panhandle Construction Co., Lubbock, reported has contract for water works extensions; Devlin Engineering Co., Const. Engrs., Amarillo.*

W. Va., Wheeling—City, H. L. Kirk, Mgr., receives bids Jan. 12 for laying water lines. (See Machinery Wanted—Water Line Extension.)

Woodworking Plants

Ark., Leslie—Export Cooperage Co., Inc., Station C, Memphis, Tenn., advises one section of plant burned; have arranged placing new machinery in another part of the works, expect to be in operation again next week.*

Ky., Hopkinsville—Forbes Manufacturing Co. will rebuild plant, burned at loss of \$500,000.

Miss., Jackson—Rathbone, Hair & Ridgeway, 2248 Laffin St., Chicago, Ill., reported establish \$100,000 box factory in southwest Jackson.

Mo., St. Louis—Maplewood Planing Mill & Stair Co., 2721 Sutton Ave., erect \$11,000 factory, 108x101 ft., 2-story, brick.

Mo., St. Louis—Millwork—Hardwood Products Corp., capital \$250,000, incorporated; D. L. Kimberly, 1404 Federal Commerce Trust Bldg.

Va., Altavista—Cedar Chests—The Lane Co. let contract to C. W. Hancock & Sons, Krise Bldg., Lynchburg, for additions to both ends of main manufacturing building, which is 1-story reinforced concrete; estimated cost \$130,000; increasing annual output; Lockwood, Greene & Co., Engrs., 1 Pershing Square, New York.*

Va., Lynchburg—Snidow-McWane Furniture Co., Inc., Geo. C. Walker, Sec., Kuse Bldg., plans erecting \$30,000 plant, 35x50x15 ft., frame and concrete; install \$10,000 equipment.*

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.

FIRE DAMAGE

Ala., Florence—Mrs. Geo. Bliss Jones' residence; loss about \$25,000.

Ala., Mobile—Mobile Country Club, J. Frank Stevens, Sec.

Ark., Camden—B. F. Rogers' residence; loss \$15,000.

Ark., Lauratown—John K. Gibson's cotton gin and seed house; loss \$20,000.

Ark., Lincoln—J. H. Mackey's store; loss \$18,500.

Ark., Rison—W. R. Rhodes, gasoline filling station and garage; Rison Transfer Co.'s stables, W. H. Glover feed house; loss \$20,000.

Ark., Thornton—Stout Lumber Co.'s sawmill, 8 dry kilns and lumber; loss \$750,000.

D. C., Washington—Candy plant of George J. Mueller, 336 Pennsylvania Ave.; loss \$50,000.

Fla., Daytona—Main building of Hotel Islington; address the Proprietor; loss \$15,000.

Fla., DeLand—Princess Anne Hotel, 204 East New York Ave., B. H. Mundt, Mgr.

Fla., Miami—Dock of Belchor Asphalt Paving Co., 1217 N. Bayshore Drive; loss \$25,000.

Fla., Tampa—Wilson & Co.'s wholesale butter and egg plant at 929 Twig St.; loss \$25,000.

Ga., Columbus—Arenowitch Co. building, 1232 Broad St.

Ga., Sparta—McMillan Building, Broad and Spring Sts., occupied by Fred Archer novelty and soft drink business and Vardeman Drug Store; loss \$50,000.

Ky., Frankfort—Grand Theater on St. Clair St., owned by McKee, Hardie; loss \$10,000.

Ky., Hopkinsville—Wagon works and church furniture factory of Forbes Manufacturing Co., loss \$500,000.

Ky., Lexington—Richard Hymes' tobacco barn; loss \$30,000.

Ky., Lexington—Building at 544-6 W. Main St., owned by C. S. Brent Seed Co., occupied by Crane Co., A. G. Morris, Local Mgr.; loss \$45,000.

Ky., Lexington—Union Christian Church, Russell Cave pike in Fayette County, 11 miles from Lexington. Address The Pastor.

Ky., Morgantown—B. G. Waller Hardware Store, storage warehouse owned by Mrs. Margaret Richards, Odd Fellow Building occupied by Mason-Waller drug store, Crouse Shoe store, Post Office, R. L. Jones, Postmaster, and others; loss \$125,000.

Ky., Newport—Commissary building of Newport Rolling Mills.

Ky., Paducah—Riverside Hospital nurses' home; loss \$7,000.

Ky., Versailles—John Bishop's residence, Sowards Ferry pike, near Versailles.

La., Alco—Alco Hotel; loss \$10,000; address the Proprietor.

La., Baton Rouge—D. R. Barfield's residence, Bayou Sera Rd., Istrouma Heights; loss \$10,000.

La., Clarks—Roundhouse of Louisiana Central Lumber Co.; loss \$20,000.

Md., Catonsville (Br. of Baltimore)—Community house of Home of the Society of the Daughters of the Eucharist, near Catonsville; Miss Katherine Dietz, Supt.

Md., Cockeysville—Ernest Chilcoat's residence, Centerbrook, Baltimore County; loss about \$10,000.

Md., Ocean City—Atlantic Hotel owned by Dr. C. W. Purnell, loss \$100,000; light and power plant of Eastern Shore Gas & Electric Co., loss \$100,000; Seaside Hotel owned by H. O. Cropper, Berlin, loss \$35,000; Ocean City Pier, owned by Pier Co., loss \$50,000; Casino Theater, Philadelphia owned, loss \$40,000; Dolles Candyland, loss \$15,000; cottage of Dr. Purnell, loss \$2,000; dwelling of Harry C. Gundy, mgr. of light and power plant, loss \$2,000; buildings damaged were: Walls Hotel, owned by Eli Walls, loss \$3,000; Atlantic Summer Garden, owned by Dr. Purnell, loss \$3,000.

Miss., Magee—Variety Store and post office building, owned by Tom Slingletory; Magee Cafe.

Miss., Sumner—City light and water plant; loss \$75,000. Address The Mayor.

Mo., Forsyth—Miller Hotel, Wolf & Brown's store, post office, Parish & Boswell's confectionery store; loss \$40,000.

Mo., Fredericktown—Miller Garage, loss \$40,000.

Mo., Kansas City—W. H. Coffey Photograph Studio, 604 Lellis Bldg.; Eve Olson Beauty Parlor adjoining; loss \$9,000.

Mo., Kansas City—Morgan-Marshall Motor Co.'s building at 1717 Oak St.; loss \$11,500.

Mo., Puxico—Power plant of Missouri Power & Development Co.; loss \$30,000.

Mo., St. Louis—Dwelling, Clayton and North and South Rds., St. Louis County, owned by E. Davis Realty & Mortgage Co., 1101 Locust St.

Mo., Sweet Springs—Collonade Hotel, loss \$20,000, address the Proprietor; Jesse Harvey Furniture Co. store; loss \$12,000.

N. C., Asheville—Farmers' Federation Building on Roberts St., Ebbs Brothers, wholesale grocers; Biltmore Wheathearts Co. and Crane & Co., wholesale plumbing supplies; loss \$500,000.

N. C., Brevard—St. Philip's P. E. Church, Rev. Harry Perry, Rector.

N. C., Charlotte—J. H. Van Ness' residence, 304 W. Fifth St.; loss \$7,000; John K. A. Alexander's residence, 407 N. Graham St.; loss \$3,000.

N. C., Hickory—Martin Furniture Co.'s plant; loss \$150,000.

N. C., Wilmington—First Presbyterian Church, Third and Orange Sts.; Dr. A. D. P. Gilmour, Pastor; loss \$200,000.

Okla., Atoka—Courthouse; loss \$140,000. Address Atoka County Comms.

Okla., McAlester—Toll bridge over South Canadian River, on Jefferson Highway. Address Pittsburg County Comms.

Okla., Ponca City—Vance Motor Co.'s cleaning room; loss \$30,000.

S. C., Batesburg—Mitchell Hall dormitory at Summerland College; loss \$40,000; Rev. J. J. Long, Little Mountain, Pres. of Board of Trustees.

S. C., Charleston—Building and storage shed of Merchants Fertilizer and Phosphate Co.; loss \$300,000.

S. C., Clio—Rev. A. G. Buckner's residence; loss \$20,000.

S. C., Dillon—Archie Hunt's store building, loss \$10,000, Dr. A. G. Buskner's residence, Red Bluff, loss \$35,000; Alex Saleby's residence, loss \$7,000.

S. C., Fort Mill—Store and dwelling of John W. Gunn.

S. C., Greenwood—Paul Wilson's residence, machine shop, etc.; loss \$25,000.

S. C., Hylan—Department store of C. C. Finklee Co.; loss \$100,000.

S. C., Lake City—Warehouse of M. K. Gravelly Co.; livery stables of Stuckey Live Stock Co.; loss \$75,000.

S. C., Liberty—Millinery department in rear of T. A. Gary Department Store, owned by Mr. Gary; loss \$15,000.

Tenn., Chattanooga—W. H. Davenport's residence, Lookout Mt.; loss \$30,000.

Tenn., Jackson—W. H. Collier's residence, R. F. D. No. 6.

Tenn., Lenoir City—Restaurant of John T. Lee & Son, W. D. Moulton shoe repair shop, Prater & Blackburn Co.'s grocery; loss \$18,000.

Tenn., Pulaski—Warehouse owned by B. F. McCrew, occupied by M. Cohen & Sons; loss \$20,000.

Tex., Dallas—Apartment house at 1812-14 Corsicana St., South Dallas, owned by H. J. Cummings, St. Joseph, Mo.; loss \$35,000.

Tex., Dallas—Arthur A. Everts Co. store, 1114 Main St.; loss \$150,000.

Tex., Dallas—Building occupied by Ly-Nola Co., at 2400 Williams St.; loss \$25,000.

Tex., Denton—D. Blair's rooming house; George M. Ryan's store; loss \$10,000.

Tex., Houston—Building at 51-3 Decatur St., occupied by Jacobs Auction & Salvage Co., John Williams' Billiard Parlor, Dr. J. D. Lamer and Dr. W. T. Allison; loss \$75,000.

Tex., Lorraine—Office of Lorraine Leader, weekly newspaper; Dewdrop Inn, Masonic Hall, Deland Garage, Lorraine Bakery, Crystal Theater, Odd Fellows' Hall and other buildings, loss \$100,000.

Tex., Smiley—A. S. Billings' country residence.

Va., Alexandria—Warehouse of H. Kirk & Son, foot of King St.

Va., Cedar Bluff—Busy Bee Restaurant, Cedar Bluff Motor Co. building; loss \$25,000.

Va., Danville—Filling station operated by Automotive Service Corp.

Va., Livingston Heights—Residences of Jas. Campbell, Mrs. Amanda Whiting, Chas. Wade Pelkerton and Wm. H. Campbell; loss about \$35,000.

Va., Norfolk—Kendall Hat Shop, Thrift Millinery Shop, Elliott & Gilpin Radio Store, Chop House Restaurant, Brown's oyster house, Ladies' Specialty Shop, Lunde's Beauty Shop; loss \$50,000.

Va., Purcellville—Dwelling on J. V. Nichols' farm, occupied by J. Curtis Wortman.

Va., Reedville—Masonic Bldg., loss \$15,000; lower floor occupied by Texas Co., loss \$2,000; Russell Dey's residence, loss \$3,500; John W. Pearson's residence, loss \$2,000.

Va., Schoolfield (Br. of Danville)—Cowan's Hotel owned by Riverside & Dan River Cotton Mills.

Va., South Boston—Garland Hotel, operated by Mrs. G. E. Faulkner, L. O. Crenshaw, City Shoe Store, Edmondson Tobacco Warehouses, City Barber Shop, First National Bank, Gilliland's Department Store, Reams Furniture Co., E. C. James, Mgr.; Henry Bermann, dry goods; Patterson Dry Goods Co., Palace Pool Parlor, Ed. Norman, Propr.; Ebrlich's Department Store; G. Higler, dry goods; B. Goodfriend, dry goods; Israel Clayborn, grocer; loss \$750,000.

W. Va., Beckley—Building owned by H. E. Carter, occupied by The Hub Department Store, T. J. Fink, owner; loss \$100,000.

W. Va., Ceredo—City hall and fire dept. bldg.; loss \$7,500. Address The Mayor.

W. Va., Eccles—Four buildings of Crab Orchard Improvement Co., including machine shop, electric and blacksmith shop, etc.; owned by Co., D. B. Wentz, Land Title Bldg., Philadelphia, Pa.

W. Va., Fairmont—Gasoline compressing plant of South Penn Oil Co. near Metz.

W. Va., Huntington—Westova Transit Co., 219 Tenth St., garage and buses; loss \$40,000.

W. Va., Huntington—Broh Building, on Fourth St., owned by Julius Broh; loss \$85,000.

W. Va., Martinsburg—Furniture factory of Berkeley Upholstering Co.

W. Va., Wheeling—Zarnitz Wholesale Grocery Building, Bachman Building, loss \$150,000; Rogers Building, loss \$25,000; residences of R. D. Roberts, 314 S. Penn St., and J. B. Catlett, 312 S. Penn St.; loss \$10,000.

W. Va., Wheeling—Webb mine of The George M. Jones Coal Co., South of Shady-side; loss \$75,000.

Damaged by Explosion

Fla., Pensacola—Fire retort at the Newport Tar & Turpentine Co.; loss \$200,000.

BUILDING NEWS

BUILDINGS PROPOSED

Association and Fraternal

Ala., Huntsville—Madison County Post, American Legion, plans building.

Fla., Daytona Beach—Young Men's Christian Assn., 216 N. Beach St., receiving bids for first unit of \$400,000 building, Second Ave. near Beach St.; gymnasium, library, running track, locker rooms, swimming pool, bowling alleys, basketball court; 3 stories, tile, oak and concrete floors, reinforced concrete foundation, tile and built-up

roof, hollow and interior tile, ventilators, ornamental terra cotta, rolling partitions; John A. Rogers, Archt., 508 DeLand Rd.

La., New Orleans—Sam P. Stone, Jr., Archt., 714 Union St., have plans ready after Jan. 6 for bids on electric wiring for \$2-250,000 Masonic Temple; cost \$90,000; James Stewart & Co., Contrs., 408 Pine St., St. Louis, Mo.

Md., Baltimore—Order of Eastern Star receives bids Jan. 12 at office Clyde N. & Nelson Friz, Archts., Lexington Bldg., for brick and

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limestone building, cost \$300,000; 4 stories and basement, 150x75 ft., stores on first floor, auditorium, lodge rooms, etc., above; C. L. Reeder, Mech. Engr., 916 N. Charles St.; H. F. Doeleman, Struct. Engr., 507 N. Charles; following contractors estimating: J. Henry Miller, Inc., Eutaw and Franklin Sts.; Price Construction Co., Maryland Trust Bldg.; M. A. Long Co., 10 W. Chase St.; Consolidated Engineering Co., 20 E. Franklin St.; Mason, Curley & Brady, Inc., 308 W. Madison St.; B. F. Bennett Building Co., Inc., 123 S. Howard St.; Tase-Norris Co., Inc., 903 Cathedral St.; John Hiltz & Sons Co., 343 St. Paul St.; Cogswell-Koether Co., 406 Park Ave.

N. C., Asheville—Biltmore Lodge No. 446, A. F. & A. M., erect \$40,000 temple, probably Oaks and Swan Sts.

Tex., Fort Worth—Independent Order of Odd Fellows plan \$125,000 building, Fifth and Burnett Sts.; 3 stories, brick and reinforced concrete.

Bank and Office

Ala., Selma—W. N. Varnor and associates establish bank; may erect building.

Fla., Coral Gables (Branch Miami)—Sutherland-Allen Co., Inc., erect \$30,000 office building, 310-12 Coral Way; 2 stories; 4 stores on first floor, 10 offices above; Robt. A. Taylor, Archt., 2248 N. E. Second Ave., Miami.

Fla., Haines City—Fred Oliver, H. O. Estes and others, erect \$75,000 office building, Ingraham Ave.; 2 stories with foundation for 5 stories; 40 offices and 12 stores.

Fla., Lakeland—Lakeland Real Estate Board, Wm. C. Steltz, member, plans \$500,000 building; 8 stories.

Fla., Miami—Miami Advertising Club, Henry J. Smith, member, Site Comm., plans 12-story office building; 50x150 ft.; 2 upper floors for owner; J. N. Ryan & Co., Archts.

Fla., Sebring—Chamber of Commerce, Geo. R. Kline, Pres., considers erecting marble and tile building.

Ga., Pelham—Farmers' Bank of Pelham will postpone erection of building.

La., New Orleans—New Orleans Public Service, Inc., 201 Baronne St., erect 8 to 12 story fireproof office building, Baronne and Dryades Sts.; Favrot & Livaudais, Ltd., Hibernia Bank Bldg., drawing preliminary plans.

La., New Orleans—Pere Marquette Building Co., E. M. Loch, Pres., receives bids Jan. 9 for superstructure of Pere Marquette Bldg.; also same date on steam heating system; cost \$2,000,000, 18 and 2 and 6 stories, last for garage; 129x129 ft., 144x77 ft. and 63x126 ft., cement floors, composition roof, hollow and interior tile, metal doors, mail chutes, ventilators, ornamental terra cotta, steel sash and trim, wire glass, 6 high-speed passenger elevators; S. Scott Joy, Archt., 2001 Pershing St., Chicago, Ill.; Wm. E. Spink, Asso. Archt., 608 Canal Commercial Bldg.

La., New Orleans—Sam Stone, Jr., 714 Union St., drawing plans for altering former 6-story brick Interstate Electric Co. building, Baronne and Perdido Sts.; stores on first floor, offices above.

Md., Baltimore—Israel Silberstein, 402 St. Paul Place, acquired Metropolitan Bank Bldg., Calvert and Lexington Sts.; promoting holding company to erect office building.

Mo., Kansas City—W. R. Pickering Lumber Co., 1005 R. A. Long Bldg., erect \$175,000 office building, 307 W. 11th St.; 3 stories and basement, terra cotta exterior; Shepard & Wiser, Archts., 1208 R. A. Long Bldg.; Long Construction Co., Contr., 600 Rialto Bldg.

Mo., St. Louis—Baden Bank, 8200 N. Broadway, has completed plans by Hoener, Baum & Froese, 3603 Laclede Ave., for \$100,000 building, Broadway and Baden Ave.; 2 stories and basement, brick and reinforced concrete, tile roof, marble, bronze and iron tellers' cages, vaults.

Mo., Webster Groves (Ind. Branch St. Louis)—Southwestern Bell Telephone Co., St. Louis, erect \$19,000 office building, 15 W. Lockwood St.; 2 stories, 30x43 ft., brick; owner builds.

N. C., West Asheville (Station Asheville)—Bank of West Asheville, G. D. Carter, Pres., erect building, Haywood Rd. and Richmond St.; architect not selected.

Okla., Chickasha—F. D. Shaffer plans Gas and Electric Bldg.

Tenn., Chattanooga—Chattanooga Savings Bank & Trust Co., Z. W. Wheland, Chmn., Bldg. Comm., selected R. H. Hunt Co., James Bldg., as architects for \$750,000 building, Market, Broad and Eighth Sts.; 200x60 ft.;

equipment cost about \$200,000; construction probably start by March 1.*

Tex., Dallas—J. N. McCammon, 604 Southland Life Bldg., erect \$1,250,000 office building, Main and Akard Sts.; brick (black face brick), steel, reinforced concrete and gold terra cotta construction, 24 stories, basement and sub-basement, 50x100 ft., furnishings, equipment, etc., \$225,000; J. N. McCammon, Inc., Archt., 604 Southland Life Bldg.; engineer not selected; work to start May 1.*

Tex., Dallas—Texas State Teachers' Assn., erect 15- to 20-story office and display building; cost \$600,000; furnishings, equipment, etc., \$100,000; brick, steel and reinforced concrete; J. N. McCammon, Inc., Archts., 604 Southland Life Bldg., drawing preliminary plans.*

Churches

Fla., Fort Myers—Presbyterian Church, Second and Royal Palm Sts., erect \$40,000 Sunday School; 2 stories, 50x67 ft., wood floors, concrete foundation, tile roof; Guy Platt Johnson, Archt., Pythian Bldg.; Chas. W. Russell, Contr., Box 1625.*

Fla., Tampa—Gibsonston Methodist Church erect building. Address The Pastor.

Fla., Tampa—Nebraska Avenue Methodist Church plans \$50,000 building. Address The Pastor.

Fla., Tampa—Hyde Park Methodist Church, Chas. E. Ball, Chmn., Board of Stewards, plans \$500,000 building; architect not selected.

Fla., Tampa—Tampa Heights Methodist Church having plans prepared for \$100,000 Sunday School addition. Address The Pastor.

La., Lake Providence—Grace Episcopal Church, F. H. Schneider, Chmn., Bldg. Comm., receives bids Jan. 20 (extended date) for frame building; cost \$15,000; Sam Stone, Jr., Archt., 714 Union St.

Miss., Belzoni—Methodist Church erect building. Address The Pastor.

Miss., Jackson—Rev. Chas. E. Downer is pastor of church to erect \$15,000 building.

Miss., Lumberton—First Baptist Church opens bids about Jan. 10 for brick building, Second St.; 2 stories, about 50x100 ft., concrete floors, rolling partitions, cost \$12,000; furnishings, equipment, etc., \$3000 to \$5000. Address J. B. Salmond.

N. C., Wilmington—First Presbyterian Church, Dr. A. D. P. Gilmour, Pastor, plans to rebuild church and Sunday school, noted burned at \$200,000 loss.

Okla., Chickasha—First Christian Church, care Dr. W. H. Cook, 209 First Natl. Bank Bldg., contemplates building.

Okla., Tulsa—First Baptist Church, Rev. W. O. Anderson, Pastor, receives bids Jan. 11 (lately noted Jan. 4) for auditorium unit of \$500,000 structure; separate bids for heating and plumbing and electric work; cost about \$200,000, brick, stone, steel and reinforced concrete, 1 story, basement and balcony; Linotile, linoleum and concrete floors, vault tiles, marble, limestone; Clyde H. Woodruff, Archt., Reynolds Bldg., Fort Worth, Tex.*

Tenn., Brownsville—Baptist Church, W. Main St. and Wilson Ave., R. M. Chambliss, Chmn., Bldg. Comm., First State Bank Bldg., erect \$30,000 brick, cut stone and steel auditorium; 1 story, 59x83 ft., pine floors, concrete foundation, composition roof; furnishings, equipment, etc., \$10,000; Dougherty & Gardner, Archts., 900 Stahlman Bldg., Nashville. (See Machinery Wanted—Church Furnishings, etc.)*

Tenn., Dayton—Baptist Church plans building. Address The Pastor.

Tex., Abilene—Central Presbyterian Church, Dr. R. Thomsen, Pastor, plans \$250,000 group, 11th and Harrison Sts.; main auditorium, Sunday School and parsonage; fireproof, brick, stone, steel and reinforced concrete, 2 stories, L shape, 210x140 ft.; Shepard & Wiser, Archts., R. A. Long Bldg., Kansas City, Mo.

Tex., Breckenridge—First Presbyterian Church, Rev. E. H. Hudson, Pastor, plans brick and concrete building.

Tex., Brownwood—First Christian Church plans \$100,000 building. Address The Pastor.

Tex., Brownwood—Coggin Baptist Church plans \$100,000 building. Address The Pastor.

Tex., Christoval—First Methodist Church, Jas. Ford, Chmn., Bldg. Comm., erect \$35,000 brick veneer and reinforced concrete building; 1 story and basement, 40x70 ft., plaster in basement, sheet rock above; Wm. C. Meador, Archt., 910 Dan Waggoner Bldg., Fort Worth.

City and County

Ala., Birmingham—City, John H. Taylor, Commr. of Public Safety, selected Warren, Knight & Davis, Empire Bldg., as architects for Southside fire station to replace Five Points station.*

D. C., Washington—Carnegie Library Assn., Dr. Geo. F. Bowerman, Librarian, plans branch library, Northeast Washington; site selected.

Fla., Jacksonville Beach—City Commission, Neal Finkelstein, Chmn., receives bids Jan. 12 for 2-story city hall, including plumbing and electric work; 2 stories, wood, tile and cement floors, tile and tar and gravel roof, cost \$30,000; Jefferson D. Powell, Archts., Professional Bldg., Jacksonville.*

Fla., Punta Gorda—Charlotte County Board of Commrs. will let contract Feb. 1 for courthouse and jail; cost \$145,000, furnishings, equipment, etc., \$15,000; brick, steel and concrete, 3 stories, 87x127 ft., rift pine and concrete floors, concrete foundation, tile and composition roof, hollow tile, vaults, ornamental terra cotta, steel sash and trim, wire glass; S. J. Welch, Archt., Pensacola.*

La., Lafayette—Lafayette Parish voted \$300,000 courthouse and jail bonds. Address Police Jury.*

Fla., St. Petersburg—City Commission, E. C. Reed, member, considering proposition to erect city hall.

Ga., Savannah—City, Robt. M. Hull, Mayor, erect 2 sections of stadium in 1926.

N. C., Asheville—Board of City Commissioners, John H. Cathey, Mayor, considering erection of city hall.

N. C., Charlotte—Mecklenburg County Board of Commrs., F. M. Gresham, County Auditor, selected Louis H. Asbury, 1514 E. Fourth St., as architect for courthouse, E. Trade Ave.; jail on top.*

Okla., Atoka—Atoka County Board of Commrs. plan to rebuild courthouse noted damaged by fire at \$140,000 loss.

Okla., Walters—Cotton County Commission receives bids Jan. 18 for brick and reinforced concrete courthouse; 75x90 ft., 3 stories and basement, cost \$125,000; Tonini Bramblett, Archts., 416½ W. Main St., Oklahoma City.*

S. C., Spartanburg—City erect \$28,000 concrete, steel and wood athletic stadium, Duncan Park; 1 story and basement, 54x294 ft., concrete and wood floors, concrete foundation, composition roof 7000 cu. yds. excavating; equipment, etc., \$2000; open bids about Feb. 1; Collins & Simpson, Archts., Andrews Law Bldg.*

Tex., Crosbyton—Crosby County, Jake M. Mabe, County Judge, selected Southern Steel Co., 4700 S. Presa St., San Antonio, as architect for brick, steel and reinforced concrete jail; \$35,000 bonds available.*

Tex., Houston—Harris County Board of Commrs., Chester H. Bryan, County Judge, has preliminary plans by Alfred C. Finn, 505 Bankers Mortgage Bldg., for \$500,000 courthouse and jail building; steel, concrete, brick and stone, fireproof, 4 stories; accommodate 400.*

Tex., Kerrville—City voted \$110,000 courthouse bonds; 3 stories and basement, brick and concrete; jail on top floor. Address City Council.*

Va., Potomac—Town Council, A. V. Adams, Chmn., Bldg. Comm., has low bid at \$24,898 from D. E. Bayliss, Alexandria, for brick town hall and fire station; Francis Drischlen, Archt.

Dwellings

Ala., Fort Mitchell—Frank Bradley erect 1-story Colonial residence; T. W. & E. O. Smith, Archts., Columbus, Ga.

Ark., Fayetteville—H. C. Evans erect \$10,000 residence, Oakland Ave.; 7 rooms, 2 stories.

Fla., Clermont—Dr. C. D. Roman, Columbus, O., plans residence.

Fla., Daytona Beach—H. J. Gould, developing Daytona Gables, erect 20 dwellings and country club house; Peter Liechenko, Archt., Chicago, Ill.

Fla., Daytona Beach—T. J. McReynolds, 425 Atlantic Ave., erect \$11,700 residence, Halifax Drive, Granada Park sub-division.

Fla., Daytona Beach—Ribault Corp., 492 Grandview Ave., erect 11 dwellings, Ribault Ave.; total cost \$225,000.

Fla., Fort Pierce—John H. Niedringhouse Corp., St. Louis, Mo., reported erect number dwellings; total cost about \$1,000,000.

Fla., Jacksonville—H. A. Halsema, 720 W. 35th St., erect 2 dwellings, 26th St. near

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Pearl St., and 1 on Oak St., near Pinegrove St., 1 story, frame and stone; total cost \$15,500.

Fla., Jacksonville—Johnston & Newman erect 2 one-story frame dwellings, Ritter St. near 16th St.; total cost about \$10,000.

Fla., Jacksonville—O. G. Sprouse, 1801 E. Eighth St., erect 2 frame stucco dwellings, Apollo St. near Lambolt St.; total cost about \$10,000.

Fla., Miami—Thos. Dupree, 1348 N. W. Seventh St., erect \$10,000 residence, S. W. Fourth St.

Fla., Sebring—E. H. Sebring Development Co., E. H. Sebring, Pres., erect number dwellings connection with development.

Fla., Miami—Gotto, Garrettsen, Mathias Co., 100 N. E. Second Ave., erect 25 dwellings, North Miami Highlands; 5 rooms, stucco, Spanish type.

Fla., Orlando—Mrs. Lucy Pruett erect \$11,500 residence, Jefferson Court.

Fla., Sarasota—Frank Sindell, New York, erect Castilian type residence, Mathewson Blvd., Pennant Park.

Fla., St. Petersburg—Mrs. Lena B. Wales erect \$10,000 residence and garage, Murof Way, near Concourse.

Fla., St. Petersburg—Fisher Construction Co., 820 1/2 Central Ave., erect 2 frame bungalows and garages, Ridge Ave., S., near 39th St.; 1 on Third Ave., N., near 43rd St.; total cost \$10,000.

Fla., Tampa—Baker Brothers Co., Inc., 1004 Franklin St., has permit for 3 dwellings, Chester St.; total cost \$12,000.

Fla., Winter Park—Winter Park Golf Estates, Inc., erect 20 or 30 dwellings, connection with 360-acre development; cost \$10,000 each; P. C. Samwell, Archt.

Ga., Valdosta—Tillman & Winn plan several dwellings, Wilson Heights.

La., New Orleans—D. P. Curren, 1443 Calhoun St., receives bids Jan. 7 at office Lockett & Chachere, Archts., 521 Baronne St., for alterations, additions and converting 2-story frame residence, 1433 Calhoun St., into duplex; cost about \$10,000.

La., New Orleans—Savings Homestead Assn., 429 Carondelet St., and Vincent Matranga, 549 Dryades St., erect raised double cottage, St. Bernadotte and Conti Sts.; cost about \$10,000.

La., New Orleans—Dr. F. J. Wolfe, Macheca Bldg., erect single frame residence, Fontainebleau Drive and Joseph St.; cast stone, tile baths, slate roof, automatic water heaters, warm air heat, Jones, Roessle & Olschner, Archts., Maison Blanche Bldg., receiving sub-bids.

La., New Orleans—Sam Zion, 822 Austerlitz St., considers erecting duplex, Delachaise St.

La., New Orleans—Victor Huber, 5055 Canal St., erect frame residence, Metairie Court; 2 stories, 40x50 ft., slate roof, tile baths, hardwood floors, steam heat, hot water heaters, plaster interior, creosote shingle exterior, metal garage; Sam Stone, Jr., Archt., 714 Union St.; plans ready for bids in about 1 week.

La., New Orleans—W. F. Rumbert alter and erect additions to residence, State and Freret Sts.; Thos. L. Perrier, Archt., 390 Carondelet St.

Md., Baltimore—Jos. Earl Moore, Professional Bldg., erect 2-story stucco and tile residence and garage, Underwood Rd., Homeland.

Md., Baltimore—Dr. Chas. C. W. Judd, Plymouth Hall Apts., erect \$25,000 residence, Wendover Rd. near Greenway; 2 1/2 stories; brick.

Miss., Hattiesburg—Frank L. Mathews not erect residence, as lately reported.

Miss., Pass Christian—Knut Dalcron, Minneapolis, Minn., erect 5 bungalows; cost \$5000 to \$6000 each.*

Mo., Kansas City—Timothy Kelly, 4036 Troost Ave., erect \$10,000 duplex, 5443 Tracy St.

Mo., St. Louis—Mrs. Sarah Bullock erect residence, Forsythe Blvd.

N. C., Durham—Dr. N. M. Johnson, Watts St., erect \$12,000 duplex, Gloria Ave.

Tex., Amarillo—Wm. Frost erect \$12,000 residence; brick and concrete, 1 story; Wm. C. Townes, Archt., Old Post Office Bldg.

Tex., Austin—M. H. Reed, Littlefield Bldg., repair residence, 1712 Rio Grande St., damaged by fire at about \$20,000 loss.

Tex., Breckenridge—Jack B. Roberts erect \$18,000 residence; brick veneer, 2 stories, 32x45 ft., slate roof; Bryan & Sharp, Archts., 1301 Athletic Club Bldg., Dallas.

Tex., Dallas—C. D. Cain, Ravenia St., erect 23 cottages, 2800 block Alden and W. 12th Sts.; 5 rooms, brick veneer; total cost \$74,250.

Tex., Dallas—LeRoy Munger, Jr., 1900 N. St. Paul St., erect \$30,000, English type residence; brick, stone, stucco and half timber, 2 stories, 35x70 ft., Fooshee & Cheek, Archts., 1310 Athletic Club Bldg.

Tex., Dallas—Allen Penniman, 3000 Junius St., erect \$15,000 residence; stone, stucco and half timber, 1 story, slate roof; Fooshee & Cheek, Archts., 1310 Athletic Club Bldg.

Tex., Dallas—Lee J. Cox, 1316 Caldwell t., erect 5 frame cottages, 1503-05-09-13-17-19-21 Rowan St.; 5 rooms; total cost \$16,750.

Tex., Dallas—A. Jack Smith, 102 S. Jefferson St., erect 2 cottages, 5210-18 Monticello St.; 5 rooms, brick veneer; total cost \$10,000.

Tex., Fort Worth—J. A. Vaughn erect \$17,500 brick veneer residence, 2216 Windsor St.

Tex., Houston—Dr. E. B. Arnold, Keystone Bldg., purchased homesite, 3404 Del Monte Drive, River Oaks.

Tex., Houston—Dr. Marvin L. Graves erect \$47,000 residence, Shadowlawn Drive; Wm. Ward Watkin, Archt., Scanlan Bldg.; Pearson & Ellis, Contrs.

Tex., Houston—L. O. Koen, Vice-Pres. W-K-M Co., Inc., West Bldg., purchased homesite, 3395 Del Monte Drive, River Oaks.

Tex., Houston—A. E. Olson & Bros. erect two \$10,000 dwellings; W. Gray and Hawthorne and Hazard Sts.; 6 and 7 rooms, brick veneer.

Tex., Lockhart—A. W. Mogle erect brick veneer residence, S. Main St.

Tex., San Antonio—Lee Jackson, 627 S. Olive St., plans 5-room and bath frame residence, 2300 block Maryland St.

Hospitals, Sanitariums, Etc.

Ala., Tuskegee—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C., receives bids Jan. 27 for construction, including mechanical equipment and approaches, of brick recreation building at U. S. Veterans Hospital; non-fireproof, about 132x52 ft., 1 story; drawings and specifications from Medical Officer in Charge at Hospital or from office Supervising Archt.

Fla., Daytona Beach—Daytona and Halifax district, F. J. Niver, Chmn., Hospital Comsn., selected Stevens & Lee, 45 Newberry St., Boston, Mass., as consulting architects for \$750,000 hospital authorized by Florida Legislature; Wilson, Berryman & Kennedy, Archts., Palmetto Bldg., Columbia, S. C.; I. O. O. F. Temple, Raleigh, N. C., and Charlotte, N. C.*

Fla., Sebring—First M. E. Church, Dr. Wm. G. Clinton, Pastor, erect 12-bed hospital between Sebring Heights and Lakeview Place; hollow tile and stucco.

Fla., Tampa—Frank Bentley, Chmn., Hillsborough County Public Health Comm., interested in \$15,000 children's tuberculosis preventorium, Macfarlane Park; Franklin O. Adams, Archt., Grand Theater Bldg., ready for bids.*

Fla., Tampa—City, Lesley Broun, City Mgr., receives bids Jan. 26 for Tampa Municipal Hospital, cost \$1,000,000; furnishings, equipment, etc., \$125,000; drawings and specifications, tender forms and instructions from office Architects Associated, Stevens & Lee, 45 Newberry St., Boston, Mass., and M. Leo Elliott, Citizens Bank Bldg., Tampa; following contractors estimating: Erlor Corp., Citizens Bank Bldg.; Fleisher Engineering & Construction Co., Logan Bros., Citizens Bank Bldg.; Ganger-Korsmo Construction Co., all Tampa; Hanson-Ward Co.*

Md., Baltimore—Johnston Hospital for Girls and School and Home for Nurses of Baltimore City, W. Graham Bowdoin, Jr., Pres., 1106 N. Charles St., receives bids Jan. 14 at office Jos. Evans Sperry, Archt., Calvert Bldg., for Margaret Price Johnston Memorial Building for nurses' home at Union Memorial Hospital, Calvert and 33rd Sts., cost \$700,000; 6 stories, irregular dimensions, brick, limestone trim, concrete and wood floors on steel beams, slate roof, extend present heating plant; accommodate 182; children's ward on sixth floor to accommodate 60; roof garden, assembly hall seating 350 on first floor; connected by bridges with main hospital; heating and wiring not in gen. contract; Herman F. Doeelman, Struct. Engr., 507 N. Charles St.; C. L. Reeder, Mech. Engr., 916 N. Charles; following contractors estimating: Frairie Brothers & Haigley, 19 W. Franklin St., Tase-Norris Co., Inc., 106 W. Madison St.; Consolidated Engineering Co., 20 E. Franklin St.; M. A. Long Co., 10 W. Chase St.; B. F. Bennett Building Co., Inc., 123 S. Howard St.; Cogswell-Koether Co.,

406 Park Ave.; Chas. L. Stockhausen Co., Inc., National Marine Bank Bldg.; J. L. Robinson Construction Co., 1130 W. Lafayette Ave.; Mason, Curley & Brady, Inc., 308 W. Madison; North Eastern Construction Co., Lexington Bldg.; Gladfelter & Chambers, 36th St. and Roland Ave.; John Hiltz & Sons Co., 343 St. Paul Place.

N. C., Sanatorium—Board of Directors, North Carolina Sanatorium, receives bids Jan. 27 for erection and equipment of children's building; separate bids for plumbing and heating; plans and specifications seen at following offices: Wilson, Berryman & Kennedy, Archts., Palmetto Bldg., Columbia, S. C., and I. O. O. F. Temple, Raleigh, N. C.; Builders' Exchange, Columbia, and Chambers of Commerce, Raleigh, Charlotte and Greensboro.*

Tex., Quanah—Dr. R. R. McDaniel and Dr. Jones reported ready for bids on 2-story and basement, brick and reinforced concrete hospital.*

W. Va., Huntington—State Board of Control, Jas. S. Lakin, Pres., Charleston, erect \$60,000 building for pay patients, Huntington State Hospital; work started on \$25,000 power plant previously noted.

Hotels and Apartments

Ark., Hot Springs—Howe Hotel Co., Inc., J. Will Howe, Rockafellow Hotel, open bids about March 1 for \$210,000, 6-story, reinforced concrete, steel and brick, 60x110-ft. Howe Hotel, Central and Canyon Sts.; concrete floors and foundation, roof garden, equipment and furnishings cost \$30,000; Sanders & Ginochio, Archts., Hall Bldg., Little Rock.*

Fla., Bushnell—J. V. Griggs, 104 W. Adobe St., Tampa, soon start work on \$150,000, 120-guest room hotel in Sunland Estates.

Fla., Coral Gables—Harry Lewey erect \$12,000, 2-story, 4-family apartment house, Salamanca Ave.

Fla., Delray—A. H. Repp, Co. erect \$50,000, 47-room, 3-story rooming house.

Fla., Fort Lauderdale—W. H. Morang & Son, 132 E. Flagler St., Miami, erect 6-story and roof garden, \$1,500,000 Morang Hotel, with frontage of 600 ft. on New River Sound, in Lauderdale Isles; first floor contain entrance foyer, 16 shops, workshops, laundry, dining room, kitchen, etc.; 425 guest rooms above second floor; John M. Peterman, Archt.; R. A. Belsham, Struc. Engr.; Maurice H. Connell, Mech. Engr.; both Miami.*

Fla., Hollywood—W. A. Robb erect \$63,000, 3-story, 30-family apartment house on Washington St.

Fla., Lakeland—Hornedena Beach Hotel, Inc., authorized Raymond C. Snow & Co., Bona Allen Bldg., Atlanta, Ga., prepare plans and specifications for proposed tourist hotel, Lake Parker.

Fla., Leesburg—Mrs. R. F. E. Cooke has completed plans and specifications for the Cambridge apartment house.

Fla., Miami—John S. Brennan erect \$60,000, 3-story, Spanish type, 30-suite apartment building, 419 N. W. 12th Ave.; Martin Hauri, Archt., 130 Avenue Obispo, Coral Gables.*

Fla., Miami—Chateau Park Corp., J. Harrison McCready, Flagler Arcade, managing director, has completed plans by DeGarmo & Varney for \$50,000, 3-story hotel on Chateau Blvd. in Chateau Park.

Fla., Miami—E. H. Banker, Chicago and New York, purchased 100 ft. on S. W. Eighth St.; plans to erect 3-story store and apartment building.

Fla., Miami—Wright & Rupp erect \$32,000, 2-story, 8-family apartment house in Biscayne Park subdivision.

Fla., Ocala—Ocala Community Hotel Co., W. D. Carn, Treas., receives bids until Jan. 19, in office of Chamber of Commerce, for erection of 8-story, fireproof, 100-guest room hotel; plans and specifications may be obtained from Peebles & Ferguson, Archts., 733 Law Bldg., Norfolk, Va.; will be operated by Griner Hotel Co., Charles B. Griner, Pres., Seminole Hotel, Jacksonville.*

Fla., Pensacola—Fairnie Hill Corp., composed of George P. Wentworth, Frank E. Welles and others, plans to erect apartment building.

Fla., Pompano—Avondale Hotel Assn. erect \$90,000, 2-story, 30-family apartment house, Dixie Highway and South St.

Fla., St. Augustine—D. P. Davis, 502 Franklin St., Tampa, developer of Davis Shores, reported, has plans in progress for \$1,500,000 hotel.

La., New Orleans—P. Copeland, Beer Bldg., 114 Baronne St., contemplates remodeling 2-

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.

story residence, St. Charles Ave., into apartment building.

Md., Ocean City—Dr. C. W. Purnell, owner of burned Atlantic Hotel, reported has plans in progress for replacing with 200-room building.

Miss., Biloxi—Lewis Scharbro, Chicago, Ill., purchased Dancy Inn Hotel, reported planning improvements.

Miss., Pascagoula—Gulf Construction Co. organized by W. P. Mason, Los Angeles, Cal.; R. H. Bordeaux, Meridian, and J. A. Leathers, Gulfport, with \$100,000 capitalization; plans to start work soon on 100-room hotel; also planning to erect other hotels and 10 bungalow courts, each containing from 10 to 12 units.

Miss., Vicksburg—Vicksburg Hotel Co., Harry E. Rice, Sr., Pres., start work soon on \$750,000, 10-story, fireproof Jefferson Davis Hotel, Walnut and Clay Sts.

Mo., Forsyth—Mrs. Miller, Propr. of Miller Hotel, recently burned, announced tentative plans for \$100,000, 3-story, native stone, 75-guest room hotel.

Mo., Mountain Grove—Chamber of Commerce promoting erection of 3-story hotel.

Mo., St. Louis—Henri J. Rush of Rush-Lee-Rush, Archts., Rosedale Bldg., associated with Hughes Brussel of Brussel-Viterbo, Constt., Contracting and Struc. Engrs., Arcade Bldg., reported planning erection of \$2,000,000, 15-story hotel, S. W. cor. Delmar Blvd. and Des Peres Ave.; 600 rooms with baths, exterior of brick with terra cotta trimming, Gothic design.

N. C., Asheville—Hamilton Block, 140 Woodward Ave., Norwood Park; R. M. Wells, Law Bldg., and F. M. Messler, 45 Austin Ave., formed Sunset Mountain Estates, Inc.; contemplate erection of hotel, dancing pavilion and creation of recreational center. (See Land Development.)

N. C., Hendersonville—Jake Wells, Richmond and Hendersonville, announced plans for erection of hotel to cost \$1,000,000 complete; contain 175 to 200 rooms.

Okla., Oklahoma City—G. A. Nichols, 115 N. Harvey St., erect two \$10,000 apartments, 703-7 W. 30th St., and two \$14,000 apartments, 617-21 W. 30th St.

S. C., Caesar's Head—H. Walter Fuller, Pres. of Laurel Park Estates, Inc., selected Beacham & LeGrand, 17-A North St., Greenville, and Medical Bldg., Asheville, N. C., prepare plans for \$1,000,000 summer hotel on Caesar's Head Mountain in connection with \$2,000,000 improvement program.*

Tex., Dallas—A. E. Hudspeth, 4625 Worth St., erect \$10,000, 20-room, brick veneer, 4-apartment building, 5321-3 Reiger St.

Tex., Fort Worth—Mrs. A. Gale, 609 St. Louis St., and Mrs. E. M. Gale erect \$35,000, brick veneer apartment house, 2260 Hemphill St.

Tex., Hillsboro—Johnson Hotel Co. has plans in progress by Paul G. Silber & Co., Bedell Bldg., San Antonio, for \$100,000, 4-story, brick, hollow tile and concrete frame hotel building.

Tex., Houston—A. E. Olson & Bros. erect \$15,000, brick veneer, 16-room, 4-apartment house and garage, W. Gray Ave. and Stanford St.

Tex., Ozone—Hotel Ozone Corp., S. E. Couch, Chrm., has completed plans by Swartz & Hamblin, San Angelo, for \$100,000, 3-story, steel, hollow tile and concrete, finished in stucco, 41-guest room hotel; contract about March 1.

Tex., San Benito—Hockenbury System, Inc., Harrisburg, Pa., successfully completed campaign in which \$158,000 in securities was disposed of for erection of 75-room hotel; Chamber of Commerce, O. B. Witte, Pres., promoting.*

Tex., Wichita Falls—Morgan Estate, care Charles A. Morgan, 1105 Grace St., has plans in progress by Voelcker & Dixon, 312 Morgan Bldg., for remodeling office building, Eighth and Ohio Sts., into hotel and addition; \$200,000, 2 additional stories on present 6-story building, redecoration, new heating, plumbing and wiring, 2 new elevators, lower first floor and remodel into stores.

Tex., Willis Point—Chamber of Commerce considering plans submitted by J. A. Pittsinger, S. W. Life Bldg., Dallas, for \$59,000, fireproof, brick, 50x100 ft., 3-story hotel; J. H. Human, Chmn. of Committee.*

Va., South Boston—Carrington Waddell promoting erection of \$15,000, 75-room brick hotel, Main and Broad Sts., to replace Garland Hotel destroyed by fire.

Miscellaneous

Fla., Daytona—H. J. Gould announced construction of clubhouse at Daytona Gables; Peter Leichenko, Archt., 38 S. Dearborn St., Chicago, Ill.

Fla., Fort Lauderdale—E. J. Willingham erect \$10,000, 2-story restaurant building in Wilton Manor.

Fla., Hollywood—City Club, William S. Eitler, Pres.; William L. Adams, Vice-Pres., considering sites for erection of proposed clubhouse.

Fla., Miami—Britling Cafeteria interests erect \$30,000, 1-story cafeteria, 47 S. W. First St.

Fla., Miami—Miami Advertising Club; J. N. Ryan & Co., Archts. (See Buildings Proposed—Bank and Office.)

Fla., Tampa—Tampa Beach Incorporated erect several buildings in connection with development. (See Land Development.)

Fla., Winter Park—Winter Park Golf Estates, Inc., Dr. Roland F. Hotard, Pres., has plans in progress by P. C. Samwell for \$30,000, stucco on hollow tile, 100x56-ft. clubhouse, 1-story, with 3-story tower, tile roof, oak floors, cement foundation.*

La., New Orleans—Lamana & Co., Inc., 624 St. Philip St., receiving bids for 2-story, stucco mortuary building, N. Rampart St.; composition roof, Arcola heating, hand elevator, tile work, ornamental iron.

Miss., Jackson—Methodist Orphanage, Rev. Mr. Lewis, Supt., erect \$20,000 dormitory.

N. C., Durham—Durham Baseball Club, W. H. Rowe, Pres., Burch Ave., acquired tract at N. E. cor. Morris and Corporation Sts., for athletic field; erect grandstand and bleacher to seat 5000.

Tex., Brady—Brady Country Club plans to erect \$15,000 clubhouse.

Tex., Tyler—East Texas Fair Assn., C. W. Boon, Chmn., selected Koch & Fowler, Archts., 606 Central Bank Bldg., Dallas, prepare plans for layout of building program for next 10 years.*

Va., Richmond—Kappa Alpha Alumni Foundation, Dr. Emmett Lee Irwin, convention president, New Orleans, La., contemplates erecting \$500,000 memorial building.

Railway Stations, Sheds, Etc.

Fla., Boca Raton—Addison Mizner, Pres. of Mizner Development Corp., developers of Boca Raton, announced approval of site for proposed passenger station by Florida East Coast Rwy. Co.; Spanish type, stucco finish, red tile roof; design by Mr. Mizner.

N. C., Greensboro—Southern Railway Co., Henry W. Miller, Vice-Pres., Washington, D. C., has plans out to contractors; will open bids in about 3 weeks for erection of passenger station; following Greensboro firms bidding: Angle-Blackford Co., Moeser & Smith; also Foundation Co., 120 Liberty St., New York, and Northeastern Construction Co., Charlotte; Fellheller & Wagner, Archts., 7 E. 42d St., New York.*

Tenn., McKenzie—Louisville & Nashville Railroad will supervise construction of new passenger depot; W. H. Courtenay, Ch. Engr., Louisville, Ky.*

Schools

D. C., Washington—District Commissioners, Room 509 District Bldg., receives bids until Jan. 12 for 8-room addition, including combination assembly room and gymnasium, to Carsoza School, for use as Randall Junior High School; information at Room 427.

Fla., Fulford-By-the-Sea—Dade County Board of Public Instruction, Charles M. Ficher, Supt., purchased 10-acre tract for future high school site.

Fla., Jacksonville—Duval County Board of Public Instruction opens bids Jan. 26 for 1-story, masonry and frame school buildings in Marietta and Whitehouse; \$85,000, concrete and brick foundations, pine floors, equipment and furnishings cost \$8000, ventilators, marble, cast stone, composition shingle and built-up roofing; Jefferson D. Powell, Archt., Professional Bldg.*

Fla., Lakeland—School Board soon select site for High School building; \$450,000 bonds available.

Fla., Lake Worth—School Board, W. A. Boutwell, contemplates \$325,000 bond issue for 2 grade schools, junior high and gymnasium and domestic science building.

Fla., McIntosh—Marion County Board of Public Instruction, H. G. Shealy, Supt., Ocala, receives bids until Jan. 26 for erection of school; plans and specifications may be obtained from George MacKay, Archt., Ocala.

Fla., Orlando—Orlando Special School Tax District voted \$1,000,000 bonds for school building program; C. E. Howard, Chmn., Board of School Trustees; Howard M. Reynolds, Archt., Orlando Bank & Trust Bldg.*

Fla., Tampa—Turkey Creek School District voted \$20,000 bonds for new school building; Frank A. Winn, Archt., Citizens Bank Bldg., Address Hillsborough County Board of Public Instruction.

Ga., Swainsboro—Swainsboro School District probably vote Jan. 25 on \$40,000 bonds for new brick school building on high school campus. Address Board of Education.

Ga., Waycross—Piedmont Institute, Dr. W. C. Carlton, Pres., plans to erect new dormitory; C. E. Gibson, J. T. Gillis, members of building committee.

La., Amite—Tangipahoa Parish School Board, W. J. Dunn, Sec., issued \$115,000 bonds for erecting and equipping school buildings in School District No. 102.*

La., Franklinton—Washington Parish School Board has plans in progress by Wm. T. Nolan, Canal-Commercial Bldg., New Orleans, for \$80,000, 2-story, pressed brick high school building; composition roof, wood floors.

La., Monroe—Ouachita Parish School Board opened bids for erecting 3-story, brick school building; F. Masling, low bidder at \$107,390; J. W. Smith, Archt., Ouachita Bank Bldg.*

Md., Baltimore—Baltimore Hebrew College and Teachers' Training School, 2102 N. Eutaw St., acquired property at Eutaw Place and Dolphin St.; plans extensive improvements.

Miss., Hazlehurst—Board of Aldermen receiving bids for \$15,000 annex to white school and \$18,000 negro school.*

Mo., Bolivar—School Board purchased site for proposed school building.

Mo., Columbia—Missouri De Molay Dormitory Assn. purchased lot on Hillcrest Ave. as site for proposed \$100,000, brick dormitory; Dr. D. Stratton Brooks, Pres. of University of Missouri, is Chmn. of building committee.

Mo., St. Louis—St. Louis University receives bids until Jan. 4 for \$225,000 gymnasium on W. Pine Blvd.; plans call for concrete indoor stadium on first floor, 140x180 ft., seating 3000; swimming pool, bowling alleys, etc.

Mo., Sweet Springs—Town voted \$85,000 bonds for new school building. Address School Board.

N. C., Greensboro—Agricultural & Technical College erect \$20,000 barn. Address The President.

Okla., Shawnee—Oklahoma Baptist University, Dr. J. B. Lawrence, Pres., planning to erect \$100,000 girls' dormitory.

S. C., Charleston—Charleston County Board of Education, H. H. McCarley, Supt., plans to erect \$75,000, 8-classroom and auditorium, brick school building in St. Paul Township.

Tex., Austin—Kappa Sigma Fraternity has plans in progress by Endress & Cato, 831 Bankers Mortgage Bldg., Houston, for \$50,000, 3-story, fireproof, brick, tile and concrete fraternity house on University of Texas campus.

Tex., Colorado—Board of Education selected C. H. Griesenbeck, 1206 S. W. Life Bldg., Dallas, prepare plans for brick and concrete High School building; \$150,000 bonds voted.

Tex., Conlen—Conlen Common School District voted \$15,000 bonds for new school building; address Dallam County Board of Education, Floyd McNeill, Supt.*

Tex., Dallas—Southern Methodist University stadium committee, E. Gordon Perry, Chmn., 4515 Rawlins St., planning construction of section of stadium to include west side of present plans and to seat 13,000 at cost of \$200,000; complete plans call for seating capacity of 50,000, fields for practice, baseball diamond, tennis courts and new gymnasium, cost \$500,000.

Tex., Dallas—School Board, J. S. Bradfield, Pres., 1305 Elm St., has plans in progress by Lang & Witchell, 300 American Exchange Bank Bldg., for third-story addition to High School and new Ward School, Mockingbird Lane and Preston Road, Highland Park; brick, stone and concrete, fireproof; \$250,000 bonds voted.*

Tex., Elgin—Board of Education contemplates bond election for new school building.*

Tex., Estelline—Board of Education selected Voelcker & Dixon, 312 Morgan Bldg.,

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Wichita Falls, prepare plans for \$40,000, 2-story, brick and concrete school building.

Tex., Floydada—Floyd County Board of Education selected Peters & Haynes, Temple Ellis Bldg., Lubbeck, prepare plans for 14-classroom and auditorium school building.*

Tex., Houston—Board of Education, H. L. Mills, Bus. Mgr., has plans in progress by Endress & Cato, 831 Bankers Mortgage Bldg., for gymnasium building and addition at West End Junior High; brick, stone, reinforced concrete, steel; Robt. J. Cummings, Struc. Engr., 727 Bankers Mortgage Bldg.

Tex., Houston—School Board, H. L. Mills, Bus. Mgr., 1600 Washington Ave., selected Harry D. Payne, prepare plans for erection of Ward Schools and additions and remodeling present Ward Schools; \$4,000,000 available; brick, stone, reinforced concrete, fireproof.*

Tex., Sam Fordyce—Tobasco Independent School District reported voted \$360,000 bonds for construction of Junior and Senior High Schools; N. L. Reyna, Sec. School Board.

Tex., San Antonio—Board of Education, Frank Haines, Pres., Russell Bldg., contemplate about \$250,000 or \$300,000 bond election for new Senior High School in San Pedro Park; will also include \$60,000 for stage equipment for present high school buildings; Phelps & DeWees, Archts., Gunter Bldg.

Tex., Sherman—Austin College building committee of trustees, Dr. T. C. Clyde, Chmn., broke ground for \$200,000, 205x60 ft., brick Administration Building; Clyde & Rolfe, Archts., Sherman; C. D. Hill & Co., Const. Archts., Central Bank Bldg., Dallas; Young, Allmon & Wood have contract for foundation.*

Tex., Vickery—Board of Education contemplate bond election for erecting \$50,000 school building.

Va., Lexington—School Board planning to erect new High School and colored grade school to cost \$100,000.

Va., Roseland—State Board of Education, Richmond, recommended Bryant's Hill, near Roseland, as site for proposed High School; address Nelson County Board of Education, Lovingson.*

Stores

Fla., Okeechobee—Propst & Moseley, Contrs., P. O. Box 81. (See Machinery Wanted—Elevator (Freight).)

Ga., Thomasville—Neel Brothers leased property on S. Broad St. and on Remington Ave.; reported to develop into arcade.

La., Lafayette—Maurice Heyman receives bids until Jan. 14 for \$100,000, 2-story, pressed brick department store building; composition roof, electric elevators, plate glass fronts, show cases; Wm. T. Nolan, Archt., Canal-Commercial Bldg., New Orleans.

Md., Baltimore—Baltimore-Washington Realty Co., 16 W. Lexington St., has plans by Lucius R. White, Jr., Hearst Tower Bldg., for 1-story, brick, 149x62-ft. addition to building, S. E. cor. Garrison Blvd. and Liberty Heights Ave., to contain 8 rooms and 3 apartments; \$50,000.

Mo., Eminence—Williams Hardware & Furniture Co. erect stone business house; M. A. Powell and Dr. Hyde also contemplate erecting business buildings.

Mo., Kansas City—Valentine Realty Co., care E. J. Willett, 3619 Broadway, excavating for erection of 8-story, 159x158 ft., reinforced concrete department store building, Broadway and Valentine St.; concrete foundation, hollow and interior tile, metal doors, steel sash and trim, wire glass, incinerators, electric refrigerators, mail chutes, vaults, ventilators, marble, cast stone, limestone, terra cotta; tile, terrazzo, concrete, hardwood, linoleum and rubber tile flooring; Robert F. Gornall, Archt., 3619 Broadway.*

Mo., Kansas City—F. E. Calvin erect \$16,000, 1-story building, 534-40 Benton St.

Mo., Kansas City—G. M. Baltis acquired S. E. cor. Tenth and Holmer Sts.; develop for stores and garage.

Mo., St. Louis—Well Clothing Co., Eighth and Washington Sts., completed plans for remodeling 6-story building, Eighth St. and Washington Ave.; install high-speed elevators; Ralph Well, Pres.

N. C., Winston-Salem—Charles Stores Co., Wm. Ganter, 21 W. Fayette St., Baltimore, Md., has revised plans by G. E. Stone Co.'s Archt.; probably let contract this week for \$50,000, 4-story, brick and steel store building; bids were to be opened Dec. 21, but plans were revised and enlarged.*

Tenn., Knoxville—Briscoe Estate, P. J.

Briscoe, Jr., has plans in progress by R. F. Graf & Son, Arnstein Bldg., for transforming property at 522-8 S. Gay St. into arcade extending to State St.; \$125,000; first three floors will be developed under arcade plan, upper floors to be developed later.*

Tenn., McMinnville—W. H. Magness erect 2-story, 80x100-ft., brick stores on Main St.; interior tile, metal ceilings and doors, steel sash and trim, wire glass, plaster board, ventilators, marble.

Tex., Beeville—A. Praeger has plans in progress by W. C. Stephenson for \$12,000, 1-story, 35x50 ft., brick and hollow tile business building.

Tex., Corpus Christi—Oliver Bird, 414 Starr St., and Myron Pease, 707 S. Broadway, Corpus Christi, and Mr. Ross, Grand Island, Neb., purchased Mesquite St. property; reported to erect business buildings.

Tex., Dallas—E. W. Morten Realty Co., Jefferson Hotel, has plans in progress by W. Scott Dunne, Melba Bldg., for \$35,000 store buildings.

Tex., Fort Worth—Van Zandt Jarvis, Jarvis Heights, opens bids Jan. 15 for 3-story and basement, \$300,000, fireproof, reinforced concrete, 95x100-ft. building, to be occupied by F. W. Woolworth Co.; wood floors, tar and gravel roof; W. G. Clarkson & Co., Archts., 606 First National Bank Bldg.*

Tex., Galveston—Alexander-Bales Building Co., Hoskins Foster, 2206 Avenue C, soon select architect for \$35,000, 1-story, 100x100 ft., brick and stone store building.

Va., Richmond—Davis Brothers, Inc., 1716 Summit Ave., make alterations and repairs to building, S. E. cor. Sixth and Franklin Sts.; \$10,000.

Va., Richmond—S. P. Dowdy, 117 W. Broad St., make alterations and repairs to brick stores, 504 E. Broad St., \$10,000.

Va., Richmond—Carneal & Johnson, Archts., Virginia Ry. & Power Bldg., announced construction this month on 4-story and basement building as addition to Miller & Rhoads' Broad St. store; \$90,000.

Va., South Boston—F. R. Edmundson, executor of Edmundson estate, owners of property on Main St., recently destroyed, announced plans for immediate rebuilding.

Va., South Boston—Executors of G. T. Norwood estate, owners of property destroyed by fire, announced plans for rebuilding.

BUILDING CONTRACTS AWARDED

Association and Fraternal

D. C., Washington—Young Women's Christian Assn., 614 E. St. N. W., Mrs. Fred E. Wright, Chmn., let contract to Wm. P. Lipscomb Co., Inc., District National Bank Bldg., for administration building, 17th and K Sts. N. W.; cost \$520,000; equipment, \$75,000; Colonial type, 6 stories, basement and roof, garden, 60x90 ft., brick and stone, swimming pool, gymnasium, cafeteria, public baths and laundries, etc.; Arthur B. Heaton, Archt., 12111 Connecticut Ave. N. W.*

Tex., Abilene—Ancient Free and Accepted Masons, O. S. Burkett, Chmn., Bldg. Comm., let contract at \$68,435 to A. W. Balfanz & Bro. for temple; fireproof, brick, stone and reinforced concrete, 3 stories, 70x100 ft.; David S. Castle Co., Archt., 701-4 Alexander Bldg.; structural and reinforced steel machinery to Mosher Steel & Machinery Co., 900 S. Austin St., Dallas; steel joists, metal lath and channels, Truscon Steel Co., 115 Field St., Dallas; heating and plumbing, \$1897, Nance Webb Plumbing & Heating Co., Abilene; electric wiring, \$2015, Sun Electric Co., Abilene.*

Bank and Office

Fla., Jacksonville—H. Robin Burroughs, 70 E. 45th St., New York, is engineer for \$1,250,000 office building for Florida Realty & Securities Corp., care S. A. Lynch Enterprises, 108 W. Peachtree St., Atlanta, Ga.; 17 stories, steel, marble, terra cotta and white glazed brick, 105x105 ft., cement and terrazzo floors, concrete pile foundation, Barrett specification roof, Otis elevators; Pringle & Smith, Archts., Atlanta Trust Bldg., Atlanta; Realty Construction Co., Contr., 135 N. E. Third Ave., Miami, Fla., and Flint, Mich.*

Fla., Jacksonville—Home Building & Loan Assn., 205 E. Adams St., erect \$20,000 brick addition to bank, 16-18 Laura St.; W. D. Gerbrick, Contr.

La., New Orleans—Monahan Plastering Co., 402 Maison Blanche Annex, has plastering contract for \$125,000 office and filling sta-

Theaters

Ga., Dalton—Manning & Wink, owners of Crescent Theater, have plans for 50x106-ft. theater to seat 850.

Mo., St. Louis—William Fox of William Fox Theaters, 10th Ave. and 55th St., New York, reported planning to erect \$5,000,000 theater building; negotiating for site.

Tenn., Chattanooga—Little Theater of Chattanooga, Clayton B. Hunter, Business Mgr., 303 James Bldg., expend about \$15,000 for remodeling fire hall, Eighth St. and Park Ave., into playhouse; seating capacity of 350 to 400; work will probably be under supervision of C. E. Bearden, Archt., First Nat'l Bank Bldg.*

Tex., San Antonio—Famous Players-Lasky Corp. and S. A. Amusement Co., care W. J. Lytle, Princess Theater, opened bids for erecting 5-story and basement, brick, stone and reinforced concrete Texas Theater building, Houston St.; Walsh & Burney, 928 N. Flores St., and Sumner-Sollitt Co., National Bank of Commerce Bldg., low bidders at \$468,019 and \$476,325, will be asked to refigure; structural steel awarded to Virginia Bridge & Iron Co., Roanoke, Va.; Western Terra Cotta Co., Kansas City, Kansas, terra cotta; D. R. Hettelsater, Struc. Engr., 114 W. 10th St., Kansas City, Mo.; Boller Brothers, Archts., 508 Palace Bldg., Kansas City, Mo.*

Warehouses

Ala., Huntsville—Dixie Warehouse & Storage Co., J. B. Woodall, erect 150x480-ft. warehouse, W. Clinton St.

Fla., St. Petersburg—City reported to erect freight warehouse; \$40,000 available. Address City Engineer.

Md., Baltimore—John C. Knipp, Inc., 218 Clay St., erect \$25,000, 80x260-ft. warehouse, Pulaski St. at B. & O. Railroad.

N. C., Reldsville—American Tobacco Co., 111 Fifth Ave.; New York City, reported to erect 9 tobacco storage warehouses.

Tex., Amarillo—J. H. Bishop, 1820 Polk Ave., opened bids for erecting 2-story and basement, 100x140 ft., brick and mill warehouse; Lenford & Tucker, low bidder at \$30,000; Albert Randall, low bidder without basement at \$26,995; Roy Smith, Archt., 310 Blackburn Bldg.*

tion building, St. Charles Ave. and Lee Circle, for Texas Oil Co. of Louisiana; Rathbone DeBuys, Archt., Juan G. Landry and Albert L. Thread, Asso. Archts., all Hibernia Bank Bldg.; W. Horace Williams Co., Inc., Contr., 2003 St. Charles St.*

La., New Orleans—Pittsburgh Plate Glass Co., 314 Girod St., has glazing contract for Industrial Life Insurance Co. building; hardware, R. D. Pitard Hardware Co., Inc., 115 Chartres St.; lumber, Busby Lumber Co., 1505 Kentucky St.; oak flooring, W. J. Healy, 2223 Perdido St.; structural steel, P. C. Dowell, City Bank Bldg.; tiling, M. Federico, 318 Royal St.; Diboll & Owen, Archts., Interstate Bank Bldg.; J. V. & R. T. Burkes, Carondelet Bldg., gen. contract at \$72,000.*

La., New Orleans—Louisiana Portland Cement Co. let contract at \$21,500 to Jos. Fromherz, Inc., Title Guarantee Bldg., for 2-story stucco office building, Industrial Canal; concrete block foundation, composition roof; Favrot & Lavaudais, Ltd., Archts., Hibernia Bank Bldg.*

La., New Orleans—Nachary Builders' Supply Co., Inc., 802 Perdido St., has calking contract for Louisiana Industrial Life Insurance Co. office building; excavation and hauling, John Clade, Jr., 1118 Louisa St.; millwork, W. W. Carre Co., Ltd., 901 S. Jefferson Davis Pkwy.; painting, Gus Peterson, 730 Valence St.; plastering, lath, dampproof, cement, stucco, Monahan Plastering Co., 402 Maison Blanche Annex; sheet metal work and roofing, Groesbeck Co., 1513 Callopo St.; sidewalk lights, J. T. Mann & Co., 319 Dryades St.; brick and hollow tile, Standard Brick & Clay Products Co., 1414 Julia St.; cast stone, Architectural Cast Stone Co., 8122 Colapissa St.; electrical work, Bunn Electric Co., 835 Baronne St.; plumbing and heating, Sciambra & Masino, 636 N. Broad St.; Diboll & Owen, Ltd., Archts., Interstate Bank Bldg.; J. V. & R. T. Burkes, 1402 N. O. Bank Bldg., general contract at \$72,000.*

Mo., St. Louis—Dodier Realty & Investment Co., 200 Security Bldg., erect \$13,000 office building, 3619 Dodier St.; 2 stories, 36x76 ft., asbestos shingle roof, gas heat-

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ers; Osborn Engineering Co., Archt., E. 71st, Euclid Bldg., Cleveland, O.; E. A. Steininger, Contr., 4829 Easton St.

Tex., Dallas—Dallas Cotton Exchange, R. L. Dixon, Chmn., Bldg. Comm., let contract to Central Contracting Co., Athletic Bldg., for \$1,500,000 Cotton Exchange, St. Paul and San Jacinto Sts.; fireproof, reinforced concrete and brick, 14 stories, 190x80 ft., hollow tile, metal doors, steel sash and trim, wire glass, tile, rubber tile and concrete floors, mail chutes, marble, cast stone, terra cotta trim; Lang & Wittich, American Exchange Bank Bldg., and Thomson & Swaine, S. W. Life Bldg., Archts.*

Churches

Ark., Jonesboro—First Christian Church erect \$35,000 Sunday school building; brick and steel, 3 stories, including ground floor, 114x40 ft., concrete and hardwood floors, concrete foundation, Spanish tile roof, steel sash and trim, dumb waiters, ventilators, cast stone; E. J. Wolpert, Archt.; Cobb & Lee, Engrs., both American Trust Bldg.; no gen. contract. Address Ira A. Kirk, 1207 S. Main St. (See Machinery Wanted—Church Furnishings, etc.)

Fla., Tarpon Springs—Baptist Church started work on \$50,000 church and parsonage, Read St. near Spring Blvd.; 72x106 ft. and 60x35 ft.; auditorium seat 800. Address The Pastor.

La., New Orleans—Church of the Holy Ghost, Rev. N. O. Keane, Pastor, let contract at \$47,900 to H. W. Bond & Bro., 1019 Constantinople St., for pressed brick and cast stone trim building, Louisiana Ave. and S. Rampart St.; steel roof trusses, tile roof, 1 story and choir gallery, 53x120 ft., concrete and mastic floors, reinforced concrete foundation; Diboll & Owen, Ltd., Archts., 412-15 Interstate Bank Bldg.*

Md., Baltimore—St. John's and St. Paul's M. E. Churches, South, combined and let contract to B. H. B. Ennis, 1933 E. 31st St., for Trinity M. E. Church, South, Liberty Heights Ave. near Rosedale Ave.; cost about \$175,000. Alfred C. Leach, Archt., 411 N. Charles St.*

Mo., Kansas City—Jamison Temple M. E. Church, T. J. Moppins, 2200½ Tracy Ave., erecting \$40,000 brick and stone building; 2 stories, 50x103 ft., maple floors, composition shingle roof, metal ceilings, plaster board, ventilators, rolling partitions; furnishings, equipment, etc., \$6000 to \$7000; hot-air (blower) heating and electric work not let; will purchase lumber; Wilkinson & Crans, Archt., Midwest Bldg.; F. E. Bundy, Contr., 1827 Paseo Blvd.; plumbing, C. W. Herald, 1315 26th St. [See Machinery Wanted—Seating (Church); Electric Lighting Fixtures; Art Windows; Pipe Organ.]*

Tex., Galveston—Zion Lutheran Church let contract at about \$12,000 to Wm. L. Kothe, 918 Avenue H, for hollow tile and stucco building, 18th and Market Sts.; 1-story, 58x34 ft., concrete foundation, asbestos slate roof, plaster board; furnishings, equipment, etc., \$6000. (See Machinery Wanted—Furnishings, etc.)*

Va., Herndon—Roman Catholic Church erect building; Case Construction Co., Contr., Purcellville.

City and County

Ala., Birmingham—City Commission, W. E. Dickson, member, let contract on fixed fee basis to Inglenook Construction Co., 4011 First Ave., for reconstructing burned City Hall; cost \$100,854; D. O. Whildin, Archt., 515 N. 21st St.*

Tex., Fort Worth—City, R. D. Evans, Supt. of Recreation, City Hall, erect brick or steel gymnasium and concert building; 1 story, 120x156 ft., hardwood floors, concrete foundation, fireproof roof, hollow tile, metal ceilings, wire glass, plaster board; cost \$40,000; furnishings, equipment, etc., \$10,000; architect not selected; open bids after approval of bonds. Address Mr. Evans.*

Tex., Groesbeck—City let contract for \$40,000 city hall and fire station to Gregory & Hope, Mexia; brick and concrete.*

Tex., Waco—McLennan County Board of Commrs. let contract at \$9672 to Sparks & Williamson for remodeling women's dept. in jail; cell and steel work, Pauly Jail Building Co., 2215 DeKalb Ave., St. Louis, Mo.; plans by Manton Hannah, County Engr.*

Dwellings

Fla., Arcadia—Geo. Leitner let contract to D. F. Gibbons for brick residence, E. Oak and Manatee Aves.; work started.*

Fla., Coral Gables (Branch Miami)—Investment Builders Corp. erect \$10,000 dwelling, 821 Columbus Blvd., Granada section; also \$10,000 dwelling, 1114 Madrid St.; H. Geo. Fink, Archt., Congress Bldg., Miami; owner builds.

Fla., Coral Gables (Branch Miami)—J. K. Roberts, 201 N. E. First Ave., Miami, erect 2 dwellings, 1216-1220 Avenue Aguilla; total cost \$18,000; H. Geo. Fink, Archt., Congress Bldg.; S. T. Roberts, Contr.

Fla., Coral Gables (Branch Miami)—Builders Investment Co. erect 2 dwellings, 1106-10 Columbus Blvd.; H. Geo. Fink, Archt., Congress Bldg., Miami; Allen-Artley Construction Co., Contr.

Fla., Coral Gables (Branch Miami)—F. W. Fischer, 1354 N. E. Miami Court, Miami, erect 15,000 residence, 918 Ferdinand St.; H. D. Steward, Archt., 591 First National Bank Bldg.; O. A. Gundlock, Constr. Supervisor.

Fla., Coral Gables (Branch Miami)—C. W. Hinman, 215 Avenue Mendoza, started work on \$20,000 residence, Riviera section; Cuban tile roof, showers.

Fla., Coral Gables (Branch Miami)—Steve Jennings, 2728 N. E. Second Ave., Miami, erect \$20,000 residence, Tamiami Place; Geo. N. Fowler, Archt.-Contr.

Fla., Coral Gables (Branch Miami)—Fred H. Kirtley erect \$80,000 residence, University Drive; 2 stories, concrete block and stucco, 3 tile baths, showers; Skinner & Pierson, Archts.; Coral Gables Construction Co., Contr.

Fla., Coral Gables (Branch Miami)—Wallace & Warner, Franklin Trust Bldg., Philadelphia, Pa., has permit for \$20,000 dwelling, 1314 Lisbon St., as first item on building program; Melvin A. Crawl, Archt., care owner; Marshburn Construction Co., Contr.

Fla., Daytona Beach—J. Blampied, Dedham, Mass., started work on \$25,000 stucco dwelling, Avenue La Vista, Daytona Shores; Italian-Renaissance type; erect 11 or more additional dwellings; owner builds.

Fla., Eau Gallie—Jos. E. Torrence erecting 6 dwellings; cost \$7000 to \$15,000 each.

Fla., Jacksonville—Mrs. Johnson erect \$12,000 residence, Challen and Herschell Sts.; 2 stories, tile and stucco; Nell Christopher, Contr.

Fla., Winter Garden—R. W. Wimbish and B. W. Cahn erect \$20,000 residence; 2 stories, 40x50 ft., hollow tile, hardwood and concrete floors, tile floors in 2 baths, tile roof; O. C. Wimbish, Draftsman; R. W. Wimbish, Contr.*

Fla., Lakeland—Jos. P. Schreiber erect 60 dwellings; contract for 4 let to Alonte Logan; 4 rooms, kitchenette and bath.

Fla., St. Petersburg—Reisen, Burbank & Rand erect 50 dwellings, Unit A, Seminole Estates; cost about \$20,000 each, Spanish type, Frigidaires.

Fla., St. Petersburg—Mrs. Hamilton C. Bates, Chester, Conn., erect several dwellings, Seminole Estates; work on one started.

La., Lake Charles—Mabry Manufacturing & Lumber Co., 1700 Crockett St., Beaumont, Tex., has \$7000 millwork contract for R. E. Krause's residence; R. S. McCook, Archt., Frank Bldg.; P. Olivier & Sons, Inc., 114 Bilbo St., gen. contract at about \$60,000.

La., New Orleans—Frank Capra, 2029 Frenchmen St., erect double frame bungalow, Priour and Johnson Sts.; receiving sub-bids.

La., New Orleans—V. Misuraca, 1134 Chartres St., erect 2 double cottages, Frenchmen and Dorgenois Sts.; total cost \$10,600; Salvatore Saputo and Luke Governall, Contrs., 419 Frenchmen St.

La., New Orleans—Dr. J. W. Warren, Physicians and Surgeons Bldg., erect \$11,000 stucco building; A. P. Crochet, Contr.

La., New Orleans—Acme Homestead Assn., 802 Poydras St., erect 2 frame duplexes, Gen. Taylor and Milan Sts.; total cost \$15,000; Walter E. Douglas, Contr.

Md., Baltimore—Lawrence Hall Fowler, 347 N. Charles St., let contract to L. L. Chambers, Inc., 36th St. and Roland Ave., for \$16,000 brick residence, Canterbury Rd. near Mallory Ave.; 2½ stories, 39x28 ft., slate roof; plans by owner.*

Md., Baltimore—A. Wm. Field, 320 W. Biddle St., erect \$20,000 residence, Northway and Underwood Rd.; 1 story, 30x74 ft. and 19x20 ft., brick, slate roofs, vapor heat; Palmer, Willis & Lambdin, Archts., 513 N.

Charles St.; L. L. Chambers, Inc., Contr., 36th St. and Roland Ave.

Md., Baltimore—E. M. Klingel, 3416 Guilford Terrace, let contract to L. R. Andrew for \$15,000 hollow tile and stucco residence and garage, Kemble St. near Greenway; 2½ stories, 39x35 ft. and 20x20 ft., slate roofs, hot water heat; Geo. Schmidt, Archt., 9 E. Pleasant St.*

Mo., St. Louis—A. W. Shapleigh, 4376 Westminster St., erecting fireproof residence, Ladue Rd.; reinforced concrete; Beverley T. Nelson, Archt., Chemical Bldg.; Frank Wyatt, Contr.

Mo., University City (Station St. Louis)—E. J. Robertson, 508 Olive St., erect \$10,000 brick residence, 7400 University Drive; 2 stories, 41x42 ft., slate roof, hot-water heat; J. L. Bowling, Archt., 384 Arcade Bldg.; Sachse Construction Co., Contr., 819 Chestnut St.

Tenn., Dayton—A. P. Haggard erect cream brick bungalow, S. Market St.; material on ground.

Tex., Dallas—C. H. Huvelle, 829 N. Mar-salls Ave., erecting \$15,000 brick veneer residence; 2 stories, 7 rooms, oak and rubber tile floors, composition roof; W. H. Reeves, Archt.-Contr., Andrew Bldg.*

Tex., Houston—Mrs. T. A. Johnson, 3803 Main St., starts work about Jan. 1 on brick veneer and frame residence, Shadowlawn; 2 stories, 71.7x29.2 ft., wood joists, oak, tile and rubber tile floors, concrete foundation, slate roof, incinerator, electric refrigerator, cast stone; J. W. Northrup, Jr., Archt., West Bldg.; G. C. Street Construction Co., Contr., Box 1943.*

Tex., Houston—Richard M. Yarrington, Jr., 1311 Yale St., erect brick veneer bungalow, Prospect Ave. near Hutchins St., Riverside Terrace; 7 rooms, English type; Howell Kidd, Contr., 4405 Main St.

Tex., San Antonio—C. L. Witherspoon, Frost Bldg., let contract at \$24,868, to G. W. Mitchell, Builders Exchange Bldg., for residence, Belknap Place and Kings Highway; wiring, Martin Wright, 104 Elsmere Ave., \$737; plumbing, Jud & Ormond, 703 N. Flores St., \$1613; 2 stories, hollow tile and stucco; Adams & Adams, Archts., Builders Exchange Bldg.*

Government and State

Tex., Palacios—36th Division, Texas National Guard, Lieut.-Col. Claude A. Adams, U. S. Property and Disbursing Officer for Texas, let contract at \$96,025, to N. A. Saigh Co., Builders Exchange Bldg., San Antonio, for 58 mess halls, 35 latrines, 28 bath-houses, 6 officers' baths, water works system, etc., pump house machinery and equipment to Southern Engine & Pump Co., 615 Washington Ave., Houston; air pump and piping by day labor.*

Hospitals, Sanitariums, Etc.

La., Baton Rouge—Louisiana Tuberculosis Comsn. let contract at \$34,800 to B. Ransom for sanatorium at Greenwell Springs, concrete and stucco, 1 story; main building and 4 temporary wings to accommodate 32; if additional \$27,200 is raised will erect permanent wings. Favrot & Livaudais, Archts., Hibernia Bank Bldg.*

Tex., Marshall—Marshall Hospital Assn., M. Turney, member, let contract at \$46,000 to Campbell & White, Cooper, for fireproof hospital; 3 stories, 37x98 ft., concrete floors and foundation, Barrett roof, incinerator, dumb waiters, ventilators; John Carpenter, Archt., Woolworth Bldg.*

Tex., Vernon—Dr. A. B. Garland erect \$30,000 hospital by day labor; brick, stone and reinforced concrete, 2 stories and basement, 111x42 ft.; R. H. Stuckey, Archt., Chillicothe; steel work, Truscon Steel Co., 115 Field St., Dallas.*

Hotels and Apartments

Fla., Coral Gables—Coral Gables Corp. let contract to John B. Orr, Inc., 43 N. E. 20th St., for \$800,000, coral rock Douglas entrance to Coral Gables, to contain apartments; plans by Phineas E. Paist, Supv. Archt. of Coral Gables.

Fla., Coral Gables—Samuel J. Spector, 3 Seafoam Ave., Boston, Mass., erecting \$160,000, 3-story, 100x92 ft. Coral Gables Arcade; 7 stores on ground floor, 16 apartments on each floor above; tar roof, concrete foundation, wood and concrete floors, hollow tile, metal doors, steel sash and trim; equipment and furnishings cost \$35,000; Harris Bros. & Co., heating and plumbing; Dean & Co., electric work; C. L. Ware, Archt., Miami Y. M. C. A.; construction by owner. (See

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Machinery Wanted — Hotel Furnishings; Sprinkler System.)*

Fla., Coral Gables—Laura S. Durrell let contract to Biltmore Construction Co. for \$24,000, 2-story apartment and garage, 515 Avenue Catalonia, Biltmore Section; Martin Hauri, Archt., 130 Avenue Obispo.*

Fla., Coral Gables—J. W. Ricketts of Coral Gables Construction Co., Coral Way, has permit for \$15,000 garage apartment building, 1215 Madrid St., and another at 1415 Alberca St.; plans by Phineas E. Paist, Supv. Archt. of Coral Gables.

Fla., Fort Meade—F. E. Gollan Co. has contract for structural steel and Builders Supply Co., Bon-Alan Bldg., agents for Knoxville Iron Co., will furnish reinforcing steel for Hotel Terrace for which L. A. Stow, 83 Marietta St., has general contract; all Atlanta, Ga.*

Fla., Jacksonville—Cherry Apartments, Inc., P. O. Box 456, erecting \$13,000, 2-story, frame, 34x52.9-ft. apartment house, Alga and Cherry Sts.; asphalt shingle roof, brick and concrete foundation, oak floors; plans by Mahoney Lumber Co., Myrtle Ave.; F. L. Asbury, Contr., 315 S. Myrtle Ave.*

Fla., Okeechobee—E. C. Wolff erecting 2-story, \$25,000, 32x97-ft., 12-apartment house, Sixth and Osceola Sts.; frame, stucco outside, wood lath and plaster inside, Johns-Manville roof, yellow pine and concrete floors; Florence cook stove and water heater in each apartment, by Gen. Contr.; D. B. McCarthy Co., Seventh St., plumbing; Dunklin Electric Co., electric work; H. Robinson, plastering and stucco; Strange & Johnson, painting; Propst & Moseley, Gen. Contrs., P. O. Box 81.*

Fla., St. Petersburg—Curry & Bocher let contract to J. Frank Chase, for \$50,000, 40x90 ft., tile, brick and steel, 3-story, 30-room hotel, Eighth St. North.

Fla., St. Petersburg—Engineering Sales Corp., Seth A. Jolly, Pres.; R. A. Rowland, Vice-Pres., soon start work on 8-story, steel frame and reinforced concrete apartment building; 108 apartments of 3 rooms and bath each, 3 high-speed passenger, 1 freight and service elevators; Robert F. Smallwood, Archt., Clearwater; owners build.

Fla., Sebring—Ed. Wolf started work on duplex apartment building on Kenilworth Blvd.

Fla., Tampa—Isaac Hanan, 421 W. Park Ave., completed agreement with Kirkeby-Watts & Co., 105 S. LaSalle St., Chicago, Ill., for financing \$500,000 additional apartment houses in Hanan Park and Hanan Estates; erect 40 12-family buildings, eight of which are now under construction.*

Fla., Tampa—Broadmoor Park Development Co., Cass St., erecting 15 apartment and dwelling buildings in Broadmoor Park; brick and frame, \$200,000; Friend & Bournier, Contrs., 214 Stoval-Nelson Bldg.

Fla., Tampa—Citizens Bank & Trust Co., Dr. L. A. Bize, Pres., 702 Franklin St., let contract to G. A. Miller, Petteway Bldg., for \$50,000 apartment house on W. Amelia Ave., Tampa Heights, for employees.

La., New Orleans—C. Bennette Moore, 109 Baronne St., let contract to G. E. & E. E. Reinmann, Canal-Commercial Bldg., at \$30,693, for erecting 12-apartment building, Joseph and Prytanla Sts.; Walter Cook Keenan, Archt., Liverpool & London & Globe Bldg.*

Mo., St. Louis—Mrs. Louisa Fehlhammer, 1400 Temple St., let contract to E. H. Hatchaus for two \$10,000, 25x46 ft. flats and two \$500 garages, Westmoor No. 1.

Mo., St. Louis—S. Fischman, 6923 Gravois St., erect two \$10,000, 2-story, brick, 34x46-ft. tenements, 4101-7 Utah St.; tar and gravel roofs, hot air heat; A. Fischman, same, Archt. & Builder.

Mo., St. Louis—F. C. Sipp, 5142 Rosa St., let contract to L. K. Mulberger, 5212 Murdoch St., for \$10,000, 2-story, brick, 35x50-ft. tenement, 4041-3 Pennsylvania St.; gravel roof, hot air heat.

Mo., St. Louis—J. M. Steele, Wise & Bellevue Sts., erect two \$12,000, 4-family flats and \$36,000, 12-family flat, West Park, Bellevue Court; owner builds.

Mo., St. Louis—F. J. Cornwall Co., 11 N. Seventh St., soon start work on \$600,000, 7-story, reinforced concrete, 102x158-ft. hotel apartment building, Pershing and Taylor Sts.; built-up roof, hardwood, tile, terrazzo and rubber tile floors, concrete foundation, hollow and interior tile, metal doors, incinerators, electric refrigerators, marble, terra cotta trim; equipment and furnishings cost \$100,000; G. D. Barnett, Archt., Syndicate Trust Bldg.; construction by owners.

Mo., St. Louis—A. Hayjek, 3021 Sidney St., let contract to Kloster & Co., 5215 S. Grand, for \$10,000, 2-story, brick, 34x52 ft. tenement, 3434-6 Virginia St.; composition gravel roof, furnace heat; R. Weinberger, Archt., 2043 Allen St.

Mo., University City (Sta. St. Louis)—R. B. Nash, 1744 N. Euclid St., erect \$12,000, 2-story, brick, 40x56 ft. tenement, 7222 Forsyth St.; composition (flat) roof, slate (steep) roof, steam heat; owner builds.

Tex., Dallas—Dallas Hotel Co., R. B. Ellifritz, Managing Director, let contract to Henger & Chambers, Slaughter Bldg., at \$100,000, for 2-story and basement, 50x100 ft., reinforced concrete arcade and store building, providing entrance to hotel from Main St., concrete, rubber tile and composition flooring, hollow and interior tile, metal doors, steel sash, ventilators, marble, terra cotta trim; Bryan & Sharp, Archts., Athletic Bldg.; R. O. Jameson, Engr., Southwest Life Insurance Bldg.*

Tex., Denton—R. B. Pender let contract to Lacy Construction Co., 2632 Swiss St., Dallas, at \$173,000, for 6-story and basement, steel, concrete and brick hotel; furnishings cost between \$40,000 and \$50,000; Harry L. Spicer, Archt., 1614 Amicable Bldg., Waco.*

Tex., Houston—John E. Michels, 4003 Wilmer Ave., erecting \$20,000, 2-story, 39x65.6 ft., 8-apartment house, 4001 Garrow St.; pine and oak floors, composition roof, concrete foundation; owner builds.

Va., Valdosta—Forehand, Fulcher & Poyner, 151 Fourth Ave., N., Nashville, Tenn., have contract for brick work on \$300,000 Daniel Ashley Hotel, for which Southern Ferro-Concrete Co., 50 E. Ellis St., Atlanta, Ga., has general contract.*

Miscellaneous

Fla., Miami—Henning's Original Fruit Co. let contract to J. Turney & Son for \$20,000 beverage dispensing stand.

Ga., Decatur—Woman's Club let contract to William Alden, 710 Sycamore St., for clubhouse on West Ponce de Leon Ave.; Edwards & Sayward, Archts., 101 Marietta St., both Atlanta.

Ky., Paducah—Lakeview Country Club, Emile D. Choate, Arcade Bldg., let contract to Jack Cole, 112 Guthrie Bldg., for \$50,000 clubhouse; Ed. D. Hanan, heating and plumbing; Dalbey Electric Co., 525 Broadway, electrical work; Maritz & Young, Archts., Chemical Bldg., St. Louis, Mo.*

Md., Baltimore—Florence Crittenton Home, Mrs. W. E. F. Taylor, Pres., 873 Hollins St., let contract to Price Construction Co., Maryland Trust Bldg., for alterations to home; \$25,000, 38x52 ft., slate roof, steam heat; Clyde N. & Nelson Friz, Archts., Lexington Bldg.*

Mo., St. Louis—Dodier Realty & Investment Co., 200 Security Bldg., let contract to E. A. Steinginger, 4829 Easton St., for \$229,000 alterations and additions to Grandstand, Pavilion and Bleachers, 3625 Dodier, 2917 N. Grand and 2920 N. Spring Sts.; Osborn Engineering Co., Archts., E. 71st Euclid Bldg., Cleveland, Ohio.

Okla., Oklahoma City—Dr. E. J. Cain, pastor of negro Church of God, started work on C. L. Bryant National Home for old negroes, Fourth St. and Nebraska Ave.; Williams & Jones, Contrs., Shawnee.

Schools

Fla., Jacksonville—Duval County Board of Public Instruction let contract to O. P. Woodcock Co., Duval Bldg., at \$47,251, for 6-room addition to Fishweir Park School; E. A. Walker, 170 W. 21st St., plumbing, at \$1887; Walter Denson, heating, at \$3280.

Fla., Palatka—Putnam County Board of Public Instruction, C. H. Price, Supt., let contract to W. J. Banks & Co., at \$20,000, exclusive of heating and plumbing, for 2-story, stone, tile and stucco, 180x210-ft. school building; tile roof, concrete foundation; cost of equipment and furnishings \$25,000; J. D. Points & Co., heating and plumbing; J. G. Spencer, electric work; Mark & Sheftall, Archts., 210 Clark Bldg., Jacksonville.*

Ga., Center—J. F. Darby, Vidalia, has contract for Center Consolidated School for Board of Trustees.

La., Arabi—St. Bernard Parish School Board, J. C. Blanchard, let contract to Haase & Barbay, 916 Union St., New Orleans, at \$41,500, for 2-story, hollow tile and concrete school building; Johns-Manville roof, wood and cement floors; Wm. R. Burk, Archt., Balter Bldg., New Orleans.*

La., Lafayette—Mrs. H. O. Scranton let

contract to Hopkins Lumber Co., for \$40,000 dormitory building at Southwestern Institute, Dr. E. L. Stephens, Pres.; G. B. Knapp, Archt.

La., New Orleans—Tulane University, Dr. A. B. Dinwiddie, Pres., let contract to O. M. Gwin Construction Co., 832 Common St., at \$249,903 for construction of seating section of \$300,000 stadium; contracts for dressing rooms, etc., and for field and enclosure will be announced later; Emile Well, Archt., Whitney Bldg.*

La., New Orleans—Orleans Parish School Board, E. A. Christy, Supv. Archt., Municipal Office Bldg., let contract to J. A. Petty, Godchaux Bldg., at \$232,999, for 2-story, 248.2x111 ft. Joseph A. Craig School; 32 classrooms, 2 principal's offices, manual training shop and domestic science.*

N. C., Wilson's Mills—Johnston County Board of Education, W. G. Wilson, Chmn., erecting \$16,500, 1-story, brick veneer, 90x90-ft. school building; pine floors, concrete foundation, composition felt roof; cost of equipment and furnishings \$2000; C. C. Hook, Archt., Charlotte; J. P. Rogers, Smithfield, supervising work; also erecting duplicate building at Princeton.*

Tenn., Nashville—Scarritt College, Dr. J. L. Cunningham, Pres., let contract to Rock City Construction Co., 150 Fourth Ave. N., for erection of 3 buildings to comprise first feature of program; 2 of buildings to include first section of Belle Bennett memorial group, third will be dining hall; Henry C. Hibbs, Archt., Fourth and First Bank Bldg.*

Tex., Kerrville—Board of Education opened bids for erecting 2-story, brick, hollow tile and concrete school building after plans by Adams & Adams, Builders Exchange Bldg.; following contracts let: W. C. Thrallkill, Moore Bldg., \$51,712, both San Antonio; W. B. Brown, plumbing and heating, \$12,014; Roberts Electric Co., wiring, \$649, both Kerrville.*

Tex., San Antonio—Immaculate Heart of Mary Parish recently let contract to George J. Steubben, 519 Dawson St., at \$71,000, for 2-story and basement, 57x142-ft., brick, stone, concrete school building; San Saba and San Luis Sts.; tar and gravel roof, concrete, concrete foundation, tile, concrete and edge grain pine floors, hollow and interior tile, metal ceilings, ventilators, cast stone; Vollmer Electric Co., 145 North St., electric lighting; Tarrillion Bros., 619 Mission St., plumbing; Cotter Bros., 443 Schley Ave., masonry, including tile; Schulze Bros. Mfg. Co., 110 Idaho St., millwork; C. B. Christensons Co., 318 Blum St., plastering and metal lath; Leo M. J. Dielmann, Archt., 306 E. Commerce St.*

Stores

Fla., Miami—Greater Miami Realty Co., W. Dixie Highway and Everglades Ave., let contract to Parrish Brothers Co. for \$112,000 store and office building, N. E. Second St. and Second Ave.; Robert A. Taylor, Archt., 2248 N. E. Second Ave.

La., New Orleans—Andry & Feltel, Archts., Carondelet Bldg., let contract to Charles Gilbert, Balter Bldg., at \$12,196, for converting ground floor of brick building, S. Rampart and Gravier Sts., into 6 stores, with plate glass windows on marble base, for S. Silverstein.

La., Shreveport—C. W. Lane, Giddens-Lane Bldg., and N. W. Marston, Ardis Bldg., let contract to W. H. Werner, Commercial Bank Bldg., at \$83,167, for 3-story and basement, fireproof, brick and reinforced concrete building, Market and Crockett Sts., for Lee-Baker Dry Goods Co., 116 Texas St.; Clarence W. King, Archt., 901 Giddens-Lane Bldg.*

Miss., Jackson—Rice Furniture Co., E. Capitol St., let contract to W. J. McGee & Son, 501½ E. Capitol St., at \$95,000, for erection of building; Warburton-Beacham Supply Co., 105 N. Capitol St., heating and plumbing at \$5066; Koeneman Electric Co., Millsaps Bldg., electric work, at \$2750; Otis Elevator Co., elevators, at \$8000; 5 stories, brick and steel, 100x150 ft., wood, concrete and tile floors, composition roof, reinforced concrete foundation, hollow tile, metal doors and ceilings, steel sash and trim, ventilators, sprinklers, cast stone, terra cotta; Gardner & Howe, Engrs., Porter Bldg., Memphis, Tenn.; Claude H. Lindsley, Archt., Lamar Life Bldg.*

Mo., Kansas City—Westbrook Investment Co., started work on brick and terra cotta building, 75th St. way and Westbrook way, 14 shops and 10 offices; Albert B. Fuller, Archt., 412 Grand Ave. Temple.

Mo., St. Louis—Hodiamont Investment Co., Central Natl. Bank Bldg., let contract to A.

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DeBenedetty, 3300 Lucas Hunt Road, for \$10,000, 67x118-ft., 2-story store and garage, 6016 Gambleton St.; reinforced concrete roof; Corrubia & Henderson, Archts., Central Natl. Bank Bldg.

Tenn., Erwin—M. F. Parsley and R. W. Lawson started work on 100x100-ft. building, to be occupied by Acme Feed Co. and probably cafe.

Tex., Brownwood—McInnes & Son let contract to C. V. Lemmons, at \$18,000, for 2-story, reinforced concrete, 130x63-ft. business building; metal roof, concrete floors, reinforced concrete foundation; Otis Elevator Co., Dallas, 1 freight hand-power elevator; W. H. McKnight, plumbing; Henry Mount, Archt.

Tex., Bryan—W. M. Sparks and J. F. Casey let contract to C. C. Rhodes Construction Co., 1903 Commonwealth St., Houston, at \$30,000, for 2-story, brick and hollow tile store and apartment building.

Tex., Houston—S. H. Kress & Co., 114 Fifth Ave., New York, let contract to E. S. Newcome, Dan Waggoner Bldg., Fort Worth, at \$140,000 for remodeling first 2 floors and basement of office building; H. H. Hoffman, Archt., New York.

Tex., San Antonio—W. A. Silveus, Russell Bldg., let contract to W. N. Hagy, Texas

Bank Bldg., for \$12,500, brick and concrete store building, 501 Garden St.

Theaters

Tex., Palestine—Tucker Royall and J. S. Bonner let contract to Campbell & White Construction Co. for building to replace Gem Theater; will be leased by R. and R. Theater Enterprises; Theodore Maffitt, Archt.*

Warehouses

Fla., Tampa—G. E. Rollins, Asst. Supt. of Atlantic Coast Line Railway, announced extensions to Ashley St. and Ybor City freight warehouses, to be completed in 30 days.

Ga., Brunswick—D. W. Morgan, Waycross, has contract for removing to another site and rebuilding A. B. & A. warehouse.

La., New Orleans—Ell Lilly & Co., 116 Common St., let contract to R. P. Farnsworth & Co., 500-A Canal-Commercial Bldg., at \$135,517, for 4-story, reinforced concrete and pressed brick and terra cotta trim warehouse and office building, Camp and Capdeville Sts.; metal doors, steel sash and trim, dumb waiters, marble, cast stone, terra cotta trim, tile and linoleum floors; Cabirac-Gelpi Plumbing & Heating Co., 625 Carondelet St., heating and plumbing; Moroney & Middleton,

Carondelet Bldg., plastering and cementing; Southern Builders Material Co. (Cold Springs Granite Co.), Maison Blanche Bldg., granite; Standard Sheet Metal Works, 635 S. Peters St., sheet metal work; Favrot & Livaudais, Archts., Hibernia Bank Bldg.*

La., Shreveport—M. Meriwether, 1315 Fairfield Ave., and J. Y. Snyder let contract to W. H. Buchanan, at \$11,500, for 1-story, brick warehouse, 1555 Texas Ave.; Seymour Van Os, Archt., all Merchants Bldg.; will be occupied by Sanitary Mfg. Co.

Mo., St. Louis—National Refining Co., Beaumont and Pine Sts., erect \$50,000, 2-story, 110x103 ft., brick warehouse and office building, 5137 Southwest St.; composition roof, steam heat; J. J. O'Brien, Archt.-Builder, 1210-705 Olive St.

Tex., Houston—John H. Crooker, 1202-10 State Natl. Bank Bldg., let contract to J. R. Braffet, 210 Stiles St., at \$32,000, for reinforced concrete, brick, tile, 2-story, fireproof, 50x175-ft. warehouse; private plans.

Tex., San Antonio—Crane Co., care Max Krueger, Elizabeth Road, will let contract to Ed. W. Oeffinger, Maverick Bldg., for erecting 2-story and basement, brick and concrete, 100x150-ft. warehouse and office building, Houston and Chestnut Sts.; August Herff & Co., Archts., San Antonio Loan & Trust Co. Bldg.*

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Apartment Furnishings.—Samuel J. Specter, Coral Gables, Fla.—Wants data and prices on furnishings for \$160,000, 3-story building.

Art Windows.—T. J. Moppins, 2209½ Tracy Ave., Kansas City, Mo.—Opens bids April 24 for art windows for \$40,000 church.

Asphalt.—See Building Materials.

Automatic Crimping Machines (Chimneys).—The Blue Diamond Glass Co., Third and Elm Sts., Bristow, Okla.—Wants prices on two automatic crimping machines for manufacture of glass lamp chimneys.

Automatic Water Pump.—L. H. Strum, Beach Drive, St. Petersburg, Fla.—Wants prices on automatic water pump, 200 gals. per hour.

Band Mill.—R. P. Johnson (Mchy. Dealer), Wytheville, Va.—Wants small or light portable band mill, good second-hand; correspond with manufacturer.

Bank Fixtures.—The Monroe County Bank, J. B. Barnett, Pres., Monroeville, Ala.—Wants prices on bank fixtures.

Barrels.—See Containers (Fruits and Vegetables.)

Baskets.—See Containers (Fruits and Vegetables.)

Barges.—E. W. Cooper, Engr., 509½ Deaderick St., Nashville, Tenn.—Wants prices on four medium-size barges for handling sand and gravel from dredge boat to yard; prefer steel, but will consider wooden equipment; state location, condition, etc.; immediate delivery.

Belt (Conveyor).—Alex. M. Robinson (Mchy. Dealer), Georgetown, Ky.—Wants one conveyor belt, 125 to 200 ft. long by 24 in. wide, all complete.

Boiler.—Carter's Production Works (Mchy. Dealer), Box 1191, Wilmington, N. C.—Wants 20 to 25 h. p. firebox boiler, portable, on skids or wheels; good for 150 lbs. working pressure.

Boxes, etc.—The Blue Diamond Glass Co., Third and Elm Sts., Bristow, Okla.—Wants prices on fiber boxes and other shipping materials.

Bricks.—See Building Materials.

Bridge.—San Antonio, Tex., will build 17 bridges. See Construction News—Bridges, Culverts, Viaducts.

Bucket (Clamshell).—See Crane.

Bucket (Clamshell).—See Derrick, etc.

Builders' Hardware.—Lantz Motor Co., Stigler, Okla.—Wants prices on builders' hardware, door locks for \$20,000 garage.

Building Materials.—Lantz Motor Co., Stigler, Okla.—Wants prices on brick, cement, iron and steel, glass, windows, doors, lumber, gravel, sand, roofing, etc., for \$20,000 garage.

Building Materials.—Tampa Beach, Inc., Tampa, Fla.—Wants cement, lime, sand, brick, asphalt, lumber, windows for buildings in large subdivision.

Buses.—Motor Transit Co., Edw. Jones, Sec.-Mgr., 101 Maple St., Owensboro, Ky.—Wants prices on 15 to 22 passenger buses, strictly modern, intercity type.

Cafeteria Equipment.—See Hotel Supplies.

Cans.—Norris Syrup Co., Inc., Box 3146, West Monroe, La.—Wants prices on cans for syrup; probably in carload lots.

Cartons, etc.—L. F. Yancey, Mgr., Yancey & Co., Inc., 206 Avon St., Charlottesville, Va.—Wants prices on cartons, cases, pallets used in shipping stock and poultry remedies and supplies.

Cases.—See Cartons, etc.

Cement.—See Building Materials.

Chemicals.—The Blue Diamond Glass Co., Third and Elm Sts., Bristow, Okla.—Wants prices on chemicals for glass making.

Church Furnishings, etc.—Ira A. Kirk, 1207 S. Main St., Jonesboro, Ark.—Wants prices on furnishings, equipment, etc., \$5000, for church.

Church Furnishings, etc.—Rev. Eric J. Heurilin, 412 18th St., Galveston, Tex.—Wants prices on church furnishings and equipment, including pews and pipe organ; total cost about \$6000.

Church Furnishings, etc.—R. M. Chambliss, Chmn., Bldg. Comm., First State Bank Bldg., Brownsville, Tenn.—Wants prices on church furnishings and equipment; cost about \$10,000.

Clamshell Bucket.—Alex. M. Robinson (Mchy. Dealer), Georgetown, Ky.—Wants clamshell bucket for handling sand and gravel.

Containers.—See Boxes, etc.

Containers (Fruits and Vegetables).—Famous Farms, Inc., E. M. R. Robinson, Missouri City, Tex.—Wants various crates, baskets, barrels and such containers as are used in packing and shipping grapes, tomatoes, beans, spinach, etc.

Conveyor.—E. W. Cooper, Engr., 509½ Deaderick St., Nashville, Tenn.—Wants prices on one belt conveyor to distribute sand and gravel to storage pockets; 24 to 30 in. wide, about 175 ft. long from head to tail pulley; also one moveable tripper for conveyor; to be operated on level and fed by elevator; state condition, location, etc.; immediate delivery.

Crates.—See Containers (Fruits and Vegetables.)

Crane.—E. W. Cooper, Engr., 509½ Deaderick St., Nashville, Tenn.—Wants prices on one crawler-type mounted and gasoline-driven crane, equipped with ¾ to 1 yd. clamshell bucket for picking up sand and gravel from storage pockets and loading cars and trucks; state location, condition, etc.; immediate delivery.

Derrick (Steel).—Frank Mitchell Contracting Co., Scranton, N. C.—Wants one used 5-ton steel guy derrick, first-class condition; 90-ft. boom, 105 ft. mast, for bucket operation; state price, condition, location, etc.

Derrick, etc.—E. W. Cooper, Engr., 509½ Deaderick St., Nashville, Tenn.—Wants prices on one stiff-leg derrick and clamshell bucket for unloading barges at yard, bucket to be from 1 to 1½ yd. capacity; state location, condition, etc.; immediate delivery.

Derrick (Stiff Leg).—Alex. M. Robinson (Mchy. Dealer), Georgetown, Ky.—Wants

one stiff leg derrick for handling sand and gravel.

Disinfectants.—Wylie Renovating & Supply Co., 1009 Ninth St., Wichita Falls, Tex.—Wants prices on disinfectants.

Distilling Equipment.—Sam L. Heaton, Spruce Pine, N. C.—Wants outfit for distillation of aromatic oils (oil of sweet birch).

Door Locks.—See Builders' Hardware.

Doors and Windows.—See Building Materials.

Dredge.—E. W. Cooper, Engr., 509½ Deaderick St., Nashville, Tenn.—Wants prices on clamshell and derrick type, small or medium size, to dredge sand and gravel from Cumberland River; state location, condition, etc.; immediate delivery.

Drugs and Chemicals.—U. S. Veterans' Bureau, Supply Division, Washington, D. C.—Receives bids Jan. 18 for drugs and chemicals; prices f. o. b. point of shipment.

Drugs, etc.—L. F. Yancey Mgr., Yancey & Co., Inc., 206 Avon St., Charlottesville, Va.—Wants prices on drugs, including sulphur, rosin, nux vomica, charcoal, epsom salts, alum, venetian red, gentian, capsicum, salt, black pepper, bicarbonate of soda, sulphate of iron, saltpetre, etc., used in poultry and stock remedies.

Drums (Oil).—See Pumps, etc.

Electric Lighting Fixtures.—T. J. Moppins, 2209½ Tracy Ave., Kansas City, Mo.—Opens bids April 24 for lighting fixtures for \$40,000 church.

Electric Wiring and Fixtures.—Tampa Beach, Inc., Tampa, Fla.—Wants electric wiring, fixtures, etc., for large subdivision.

Elevator.—Lantz Motor Co., Stigler, Okla.—Wants prices on elevator; use for merchandise.

Elevator (Freight).—Propst & Moseley, Contrs., P. O. Box 81, Okeechobee, Fla.—Wants prices and data on freight elevator for proposed furniture store.

Embankment.—Lake Charles Harbor & Terminal Dist. Commrs., Guy Beatty, Pres., Lake Charles, La.—Receives bids Jan. 21 for 2¼ mi. railroad embankment.

Engine or Motor.—Hackely Morrison Co. (Mchy. Dealer), 1708 Lewis St., Richmond, Va.—Wants 25 to 30 h. p. oil engine or motor.

Engines (Crude Oil).—Calhoun Machinery Co., El Reno, Okla.—Wants to correspond with manufacturers of crude oil engines, with view to representation.

Fire Hose.—T. J. Boyd, City Clk., Spartanburg, S. C.—Receives bids Jan. 20 for 5000 ft. of standard fire hose.

Flooring (Hardwood).—Fred Walker, W. Washington St., Camden, Ark.—Wants prices on clear, plain hardwood flooring.

Fountains (Water).—H. B. Mills, Box 1118, Orlando, Fla.—Wants prices on fountains used in parks, private grounds, etc.; correspond with manufacturers.

Gang Borer.—R. P. Johnson (Mchy. Dealer), Wytheville, Va.—Wants dealer price on good second-hand or rebuilt light single-column vertical gang borer, with eight spindle heads, for boring ¾-in. holes in a

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3½-in. center; complete with counter shaft.

Garage Equipment.—Harmon Oil Co., L. B. Harmon, Pres., 208 N. Maple St., Carthage, Mo.—Receives bids Jan. 15 for garage equipment.

Generator Set.—Kester Machinery Co., 430 Main St., Winston-Salem, N. C.—Wants 300 to 350 kw. 3 phase, 60 cycle, 220 volt generator, direct connected to releasing Corliss or Uniflow engine.

Generator or Motor.—W. M. Smith & Co. (Mchy. Dealer), Birmingham, Ala.—Wants 12 or 15 k. w. generator or 15 h. p. D. C. motor, 220 volts.

Glass.—See Building Materials.

Gravel.—State of Louisiana. See Construction News—Roads, Streets, Paving.

Gravel.—East Baton Rouge Police Jury, F. A. Woods, Sec., Court House, Baton Rouge, La.—Receives bids Jan. 12 for getting out of Comite River and loading in trucks approximately 2000 cu. yds. of either pit run or washed gravel for Fitzgerald Rd.

Guniting.—City of Tuscaloosa, Ala., C. E. Abbott, Mgr., Water Works Comsn.—Receives bids Jan. 26 for Contract No. 4, guniting existing clear-water well, wash-water tank and distribution reservoir; Morris Knowles, Inc., Engrs., Pittsburgh, Pa.

Handle-Making Machinery.—See Woodworking Machinery.

Hardware (Building), etc.—Tampa Beach, Inc., Tampa, Fla.—Wants hardware and plumbing for large subdivision.

Heating Apparatus.—Frank Bentley, Zack and Pierce Sts., Tampa, Fla.—Wants data on apparatus for heating homes with hot air, both by oil and coal; correspond with manufacturers.

Heating Plant.—Lantz Motor Co., Stigler, Okla.—Wants prices on heating plant for \$20,000 garage.

Heating and Plumbing System.—Putnam County Commrs., L. M. Baldwin, Chrmn., Palatka, Fla.—Receives bids Jan. 20, 1926, to furnish and install heating and plumbing in present Courthouse and addition; Marks & Sheftall, Archts., Clark Bldg., Jacksonville.

Holst.—M. K. Frank, Park Row Bldg., New York—Wants 100 h. p. electric single drum holse to carry 3000 ft. of 1-in. wire cable, 3 phase, 60 cycle, 220 volts; Lidgerwood make preferred.

Holsts.—See Saw Rigs, etc.

Hospital Supplies.—U. S. Veterans Bureau, Supply Division, Washington, D. C.—Receives bids Jan. 20 for hospital supplies.

Hotel Supplies.—C. S. Britt, Wilmington, N. C.—Wants data on hotel supplies, especially interested in cafeteria equipment; correspond with manufacturers.

Hydrants.—See Water Works, etc.

Ice Plant.—Big Sandy Ice Co., W. L. Go-forth, Pres., Big Sandy, Tenn.—Wants prices on complete equipment for both 10 and 20 ton capacity ice plants, stating size of building required for machinery.

Iron and Steel.—See Building Materials.

Jaw Crusher.—R. S. Armstrong & Bro. Co. (Mchy. Dealer), Atlanta, Ga.—Wants jaw crusher, about 18x24 in.

Kettles (Jacketed) and Urns.—U. S. Veterans' Bureau, Supply Division, Washington, D. C.—Receives bids Jan. 15 for jacketed kettles and urns.

Knives (Pocket).—S. M. Findley, Oak Park, Ga.—Wants to correspond with manufacturers of pocket knives.

Laboratory Supplies.—U. S. Veterans' Bureau, Supply Division, Washington, D. C.—Receives bids Jan. 19 for laboratory supplies.

Laundry Machinery.—U. S. Veterans' Bureau, Supply Division, Washington, D. C.—Receives bids Jan. 9 for 9 truck tubs; The American Laundry Machinery Co.'s or equal.

Lime.—See Building Materials.

Lime.—U. S. Engineer Office, Box 72, Louisville, Ky.—Receives bids Jan. 22 to furnish and deliver approximately 1180 tons hydrated lime.

Linseed Soap Base, etc.—Wylie Renovating & Supply Co., 1009 Ninth St., Wichita Falls, Tex.—Wants prices on linseed soap base and liquid soap base.

Liquid Soap Base.—See Linseed Soap Base.

Lumber.—See Building Materials.

Millwork.—Propst & Moseley, Contrs., P. O. Box 81, Okeechobee, Fla.—Want prices and data on millwork.

Miscellaneous Supplies.—U. S. Veterans' Bureau, Supply Division, Washington, D. C.—Receives bids Jan. 11 for bake oven for

U. S. V. H., Fort Bayard, N. Mex.; also one autopsy table; on Jan. 14 for 120 bedside tables; on Jan. 19 for 200 rubber bandages, 2½ in. by 4 yds.; on Jan. 20 for 1200 doz. spools adhesive plaster and 250 rolls adhesive plaster.

Mortiser.—R. P. Johnson (Mchy. Dealer), Wytheville, Va.—Wants dealers' prices on good second-hand or rebuilt light hollow chisel mortiser for cutting ¾-in. mortise, about 4-in. stroke.

Motor.—See Engine or Motor.

Motor.—See Generator or Motor.

Motors.—Calhoun Machinery Co., El Reno, Okla.—Wants to correspond with manufacturers of synchronous motors, with view to representation.

Pails.—See Cartons, etc.

Pipe (Steel).—See Water Works, etc.

Pipe (Sewer and Concrete).—Tampa Beach, Inc., Tampa, Fla.—Wants sewer pipe and concrete drain pipe 24 to 42 inches in diam. for large subdivision.

Pipe Machine.—Taylor-Parker Co., Water St. and Commercial Place, Norfolk, Va.—Wants good used pipe machine of about 6-in. capacity.

Pipe Organ.—T. J. Moppins, 2209½ Tracy Ave., Kansas City, Mo.—Opens bids April 24 for pipe organ for \$40,000 church.

Pipe Organ.—See Church Furnishings, etc.

Plumbing.—See Hardware and Plumbing.

Poles (Electric Light).—Tampa Beach, Inc., Tampa, Fla.—Wants electric-light poles, wood, concrete and steel, for large subdivision.

Press (Hydraulic).—W. M. Smith & Co. (Mchy. Dealer), Birmingham, Ala.—Wants hydraulic press for balling tin scrap.

Printing Press.—S. L. Williams, Pastor, Dadeville-Camp Hill Field, Dadeville, Ala.—Wants data and prices on small printing press to print small sheets, cards, notices, etc.

Pumps.—See Water Works.

Pumps, etc.—Harmon Oil Co., L. B. Harmon, Pres., 208 N. Maple St., Carthage, Mo.—Receives bids Jan. 15 for gasoline pumps, drums for oil, etc.

Pump (Oil).—Lantz Motor Co., Stigler, Okla.—Wants prices on oil pumps for \$20,000 garage.

Railroad Frogs and Switches.—Otis E. Zipperer, Coleman, Fla.—Wants railroad frogs and switches; correspond with manufacturers.

Ribbon Cane Syrup.—Norris Syrup Co., Inc., Box 3146, West Monroe, La.—Wants prices on ribbon cane syrup; probably in carload lots.

Road.—Baton Rouge, La. See Construction News—Roads, Streets, Paving.

Road.—State of Louisiana will build 2 roads. See Construction News—Roads, Streets, Paving.

Road.—Brownsville, Tex. See Construction News—Roads, Streets, Paving.

Road.—Jackson, Miss. See Construction News—Roads, Streets, Paving.

Roofing.—See Building Materials.

Sand.—The Blue Diamond Glass Co., Third and Elm Sts., Bristow, Okla.—Wants prices on sand used in glass manufacturing.

Sand Brick.—See Building Materials.

Sand and Gravel.—See Building Materials.

Sand and Gravel Washer.—Alex. M. Robinson (Mchy. Dealer), Georgetown, Ky.—Wants one used Bonney sand and gravel washer; state condition, location, time of delivery and price.

Sander.—R. P. Johnson (Mchy. Dealer), Wytheville, Va.—Wants dealers' price on second-hand power feed single drum sander.

Sanding Machines.—Wylie Renovating & Supply Co., 1009 Ninth St., Wichita Falls, Tex.—Wants prices on hand sanding machines, electric drive, suitable for sanding tops of school desks.

Saw Rigs, etc.—Propst & Moseley, Contrs., P. O. Box 81, Okeechobee, Fla.—Wants prices and data on gasoline-driven light saw rigs and holsts.

Scows (Dump).—U. S. Engineer Office, Box 72, Louisville, Ky.—Receives bids Jan. 10 to furnish and deliver two steel dump scows.

Seating (Church).—T. J. Moppins, 2209½ Tracy Ave., Kansas City, Mo.—Opens bids April 24 for seating for \$40,000 church.

Seating (Church).—See Church Furnishings, etc.

Sewers.—City of Miami, Fla., H. E. Ross,

Clk.—Receives bids Jan. 25 for storm and sanitary sewers.

Sewers.—Board of Awards, Baltimore, Md., Milton J. Ruark, Sewerage Engr.—Receives bids Jan. 13 for building storm drains and sanitary sewers in Sewer District J-4; brick and concrete drain; reinforced concrete pipe drain; vitrified pipe drain; vitrified pipe sewer; underdrains, manholes.

Shear.—W. M. Smith & Co. (Mchy. Dealer), Birmingham, Ala.—Wants large shear to cut 80-lb. rails or larger.

Shovel (Steam or Gasoline).—W. M. Smith & Co. (Mchy. Dealer), Birmingham, Ala.—Wants crawler-type shovel, steam or gasoline.

Sidewalks.—Vero Beach, Fla. See Construction News—Roads, Streets, Paving.

Soda of Ash.—Wylie Renovating & Supply Co., 1009 Ninth St., Wichita Falls, Tex.—Wants prices on soda of ash.

Sprinkler System.—Samuel J. Spector, Coral Gables, Fla.—Wants data and prices on sprinkler system for \$160,000, 3-story business and apartment building.

Stand Pipe.—City of Okolona, Miss., A. C. Rowe, Clk.—Receives bids Feb. 5 for construction of steel stand pipe of 100,000 gals. capacity, on steel structure 125 ft. high.

Steel (Fabricated).—Supt. of Lighthouse, Milwaukee, Wis.—Receives bids Jan. 19 for fabricated steel for one steel plate tower, for use in Milwaukee North Breakwater.

Steel Building.—J. A. Addy, Newnan, Ga.—Wants steel buildings of light construction, 25x60 ft. to 100 ft. long.

Stock and Poultry Feed Supplies.—L. F. Yancey & Co., Inc., 206 Avon St., Charlottesville, Va.—Wants prices on oyster shells, grit, etc.

Stove.—Harny Freund, 412 Altie St., Houston, Tex.—Wants to contract for manufacture of specialty patented auto exhaust cook stove.

Street.—Wetumpka, Ala. See Construction News—Roads, Streets, Paving.

Street.—City of Miami, Fla. See Construction News—Roads, Streets, Paving.

Street Lighting Equipment.—See Water Works, etc.

Street.—Grand Prairie, Tex. See Construction News—Roads, Streets, Paving.

Sugar.—Norris Syrup Co., Inc., Box 3146, West Monroe, La.—Wants prices on sugar, probably in carload lots.

Tables (Bedside).—See Miscellaneous Supplies.

Tank and Tower.—Hackley Morrison Co. (Mchy. Dealer), 1708 Lewis St., Richmond, Va.—Wants 100-ft. tower and tank having minimum capacity of 50,000 gal.

Tank (Wood Stave).—See Water Works, etc.

Tank and Tower.—See Stand Pipe.

Tow Boat.—E. W. Cooper, Engr., 509 Deaderick St., Nashville, Tenn.—Wants prices on one towboat to handle barges from dredge to yard; driven by engine using kerosene distillate or crude oil.

Tractor.—Marion Clyette, Hill County Auditor, Hillsboro, Tex.—Receives bids Jan. 18 for one 10-ton, crawler-type tractor.

Truck Tires.—State Road Dept., F. A. Hathaway, Chrm., Tallahassee, Fla.—Receives bids Jan. 20, 1926, to furnish and deliver any point in state automobile truck tires in sizes ranging from 30x3½ to 42x9, as needed for 6 months; approximately 100 tires in sizes ranging from 30x3½ to 42x9.

Ventilators.—Lantz Motor Co., Stigler, Okla.—Wants prices on ventilators for \$20,000 garage.

Valves.—See Water Works, etc.

Water Line Extension.—City of Wheeling, W. Va., H. L. Kirk, Mgr.—Receives bids Jan. 12 for laying water lines in various parts of city; H. L. Arbenn, Engr.

Water Mains.—Tampa Beach, Inc., Tampa, Fla.—Wants water mains for large subdivision.

Water Mains.—Baltimore County Commrs., Metropolitan Dist., Towson, Md., A. E. Walden, Ch. Engr.—Receives bids Jan. 25 for water mains and appurtenances at Pikesville; Proposal No. 7-W and 8-W, earth excavation and refill, Class A, B and C rock excavation and refill, Class A, B and C earth excavation and refill, Class A, B and C rock excavation and refill; cinder, gravel and concrete repaving, concrete sidewalk replacement, laying 6, 8, 10, 12, 16 in. mains, valves and fittings, lead joints, alternate bids leadite joints, placing fire hydrants.

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Water Purification Plant.—City of Port Arthur, Tex., J. P. Logan, Mayor—Receives bids Jan. 21 for furnishing materials and constructing water purification plant, including buildings, basins, aerator, clear well and other structures; Burns & McDonnell Engineering Co., Interstate Bldg., Kansas City, Mo., Engrs.

Water Works, etc.—C. R. Parlman of Parlman-Randall Co., Sarasota, Fla.—Wants following equipment for subdivision development: Storm curb manholes, cast iron water piping, steel water pipe, elbows, couplers, gate valves, hydrants and hydrant attachments, valves, etc., water pumps, water-pump equipment, wooden stove storage tank, 15,000 gal. capacity, and electrical street lighting equipment, with underground conduits.

White Way System.—City of Vero Beach, Fla., B. T. Redstone, Mayor—Receives bids Jan. 28 for ornamental white-way street lighting system, including furnishing and installing ornamental white-way lighting equipment; 227 cast iron ornamental lighting standards, 20,250 ft. of parkway cable, sockets, transformers, etc., for complete installation; Carter & Demerow, Engrs., Vero Beach.

Woodworking Machinery.—S. M. Findley, Oak Park, Ga.—Wants machinery for making chairs, turning spokes, handles, etc.

Trade Literature

What Westinghouse Did In 1925.

"The Engineering Achievements of the Westinghouse Electric & Manufacturing Company for the Year 1925" is the title of a large publication issued by that organization, having been prepared by H. W. Cope, its assistant director of engineering. One of the most striking pictures for the general reader is that at the beginning, showing a 6000-ton train on the Virginia Railway being moved by Westinghouse electric locomotives. Another impressive illustration is that of the motorship J. W. Van Dyke, which has the Diesel-electric drive. The first motor-generator locomotive is also shown in operation on the Detroit, Toledo & Ironton Railroad. Another transportation accomplishment of the year is the Brill-Westinghouse gas-electric car, that is also illustrated, and the Vesare Coach for light traction. While the achievements of the Westinghouse Company in the line of transportation are those which are most likely to attract the eye of the general public, it has also many others recorded in its book with relation to various industries, although the several household appliances are just as likely to catch the eye of the housekeeper as the cars and engines and ships are likely to draw attention from everyone. The book is handsomely gotten up and the pictures are excellent throughout.

Calendars for 1926.

One of the handsomest calendars issued this season is that of the General Electric Co., Schenectady, N. Y., consisting of twelve large pages with three months to a page, above the calendar figures being a fine picture in rich and appropriate colors representing some one of the modern uses of electricity. The McCormick-Deering Line is represented in the large wall calendar of the International Harvester Company of America, Inc., Chicago, with three months to a sheet, each page having a large picture of one of the company's products in use. O. F. H. Warner & Co., paper dealers, Baltimore, have a good-looking and practical hanger calendar with date sheets to be removed day by day, dates being in big figures, and the card on which they are mounted being done in green and white. Lockwood, Greene & Co., engineers, Boston, have a practical hanger calendar of very neat pattern, a month to a page, ac-

companied by a picture of one of the buildings erected under the design and supervision of the firm, these including several buildings South at Dalton, Ga.; Charlotte, N. C., and Spartanburg, S. C. The Irving Bank-Columbia Trust Co., New York, has a large hanger calendar, a month to a page, and containing a great deal of tax information appropriately dated for quick reference. The Cutler Mail Chute Co., Rochester,

N. Y., has an exceedingly pretty hanger calendar with picture in colors, showing a little girl dropping a letter into a mail chute in an apartment hotel, below being the calendar dates, three months to a page. F. P. Sheldon & Son, engineers and architects, Providence, R. I., have a neat and attractive but practical hanger calendar, a month to a page, at the top being a picture of an industrial plant.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers, or subscribers, or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Graybar Electric Co. Organized.

The electrical supply business carried on by the Western Electric Company has been set apart from the telephone manufacturing business and incorporated under the name of Graybar Electric Company, which gives to the supply department a separate identity and emphasizes its importance as the largest merchandiser of electrical apparatus and related equipment in the world. Since it started in 1869 as the partnership of Gray & Barton, the name which it now resumes in modified form, the supply business has grown steadily until it now serves more than 35,000 customers through fifty-five distributing houses. The Western Electric Company has been both the manufacturing company of the Bell System and a distributor of electrical supplies, but the rapid expansion of the supply department made an entirely separate corporate identity even more necessary. Physical separation of the two departments was carried out in 1923 with the opening of general offices for the supply department in the Pershing Square Building, New York. The advent of the Graybar Electric Company into this field as the successor of the Western Electric Company, to which it was also predecessor, therefore involves comparatively few changes. Among the distributing houses are those in Southern cities, viz., Atlanta, Baltimore, Birmingham, Charlotte, Dallas, Houston, Jacksonville, Kansas City, Memphis, Nashville, New Orleans, Norfolk, Richmond, Savannah, St. Louis, San Antonio, Miami and Tampa. The president of the new company is Albert Lincoln Salt, who began with the Western Electric as an office boy; Frank A. Ketcham is executive vice-president; Leo M. Dunn, vice-president in charge of merchandising and accounting; George E. Cullinan, vice-president in charge of sales; Elmer W. Shepard, treasurer; N. R. Frame, secretary. The directorate consists of the president and the three vice-presidents mentioned, Charles G. Dubois, chairman; Richard H. Gregory, comptroller; Howard A. Halligan, vice-president; George C. Pratt, general attorney, and William P. Sidney, general counsel, of the Western Electric Co. The capitalization of the company is \$15,000,000 stock, all owned by the Western Electric Co.

Pickering Governor for Fordson Tractors.

The Pickering Governor Co., Portland, Conn., says that many owners of Fordson tractors hesitate to install governors on them because of lost power, but a test recently conducted by the University of Nebraska proved conclusively that the Pickering governor is one which takes nothing away from the power of the tractor, and because of its exclusive construction—no joints or links—it is instantly responsive to the slightest load changes, and it automatically controls the motor, maintaining steady, even speed all the time and eliminat-

ing unnecessary wear and tear; furthermore, that it pays for itself within two months by saving fuel. A pamphlet explaining all of the valuable features of this governor will be sent on request addressed to the company. The Corley Manufacturing Co., Chattanooga, Tenn., is the Southern distributor for these governors.

New Engineering Organization.

The Solomon-Norcross Company, consulting engineers, has been incorporated by the corps of experts who were associated with the late Paul H. Norcross, who lost his life in the "Norman disaster" near Memphis, Tenn. The company is composed of G. R. Solomon, Frank J. Keis, Herman F. Wiedeman and M. T. Singleton. They specialize in water supply, sewerage and hydro-electric developments. Colonel Solomon heads the organization. He graduated at Rensselaer Polytechnic Institute and in association with Mr. Norcross founded the original Solomon-Norcross Company in 1906, but in 1918 he withdrew to take a commission in the United States Army. Mr. Keis is a graduate of the same institute and became connected with the same company in 1908. After Colonel Solomon withdrew he became a partner, the firm being Norcross & Keis until 1922, when he also withdrew. Mr. Wiedeman also graduated at Rensselaer, and Mr. Singleton at Georgia Tech. Both have been with the organization for years. The company will retain its Atlanta office at 1404 Candler Building, but it has also established an office at Palm Beach, Fla.

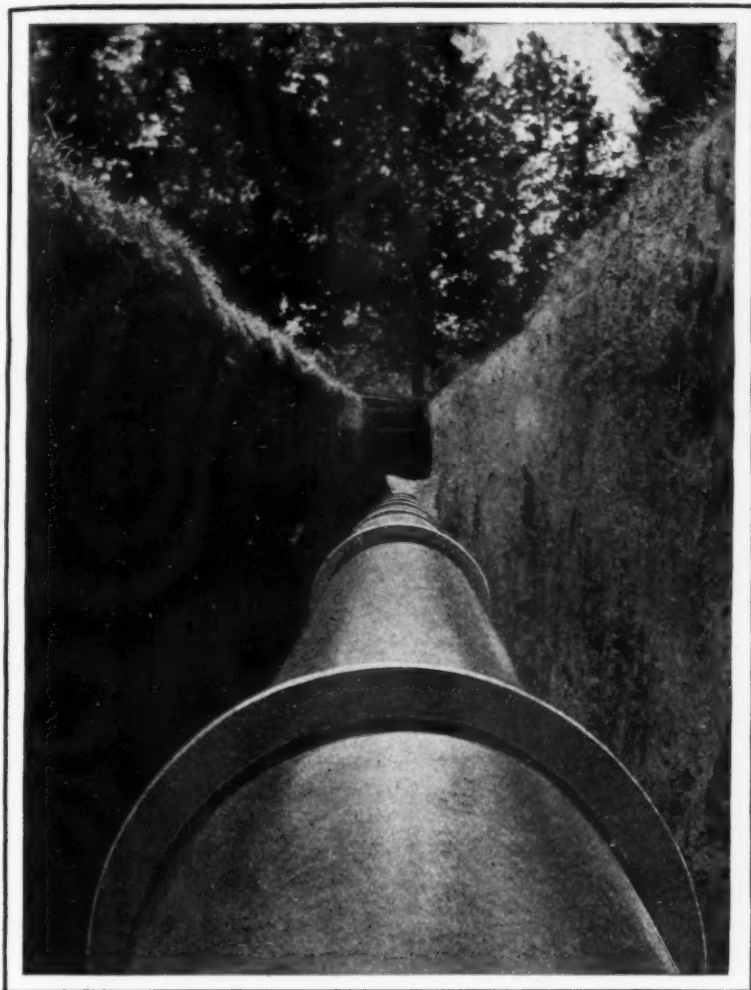
Auction of Industrial Equipment.

According to an announcement that appears elsewhere in this issue Nathan Klein & Co., 208 Centre St., New York, N. Y., after 25 years of service in the industrial equipment line, will sell their entire stock at auction on January 13, 14 and 15, beginning at 10 o'clock A. M. each day. This stock, it is stated, consists of thousands of motors, generators, air compressors, turbines, motor-generator sets, gasoline-engine generator sets, controllers, circuit breakers, grinders, drills, pumps, overhead traveling cranes, electric hoists, etc. The firm, it is further to be noted, are opening one of the largest electrical repair shops in the Eastern states, hence their retirement from their former field of activity.

Glass Plant to Be Sold.

According to a formal notice which appears elsewhere in this issue the entire plant of the Star Glass Company, including equipment, and situated at Star City, W. Va., is to be sold at auction at the courthouse in Morgantown, W. Va., at 1 P. M. January 15. The sale also includes manufactured product, etc. Further particulars will be found in the advertisement.

In writing to parties mentioned in this department it will be of advantage to all concerned if the Manufacturers Record is mentioned.



Cast Iron Pipe in the deep trench of a filter plant approach.

Empty or full, cast iron pipe stands the strain of even the deepest fill

ONE of the many reasons why cast iron pipe is the accepted standard is this factor of strength—no danger of collapse. Send for a copy of the United States Cast Iron Pipe hand book. It is full of the most valuable data.

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Dallas: 1313-1315 Main St.
Kansas City: 13th & Locust Sts.
Cleveland: 1150 East 26th Street
Minneapolis: 6th St. & Hennepin Ave.

General Offices:

Burlington, New Jersey

FINANCIAL NEWS

Bond Issues Proposed

Ala., Mobile—Inclinator—City Commrs. will call election Jan. 23 on \$85,000 bonds.*

Ala., Mobile—School—City receives bids Jan. 12 for \$200,000 5% bonds; G. E. Crawford, Mayor.

Ala., Northport—Water, Sewer—Town, J. S. Rice, Clk., voted \$40,000 6% bonds; S. Z. Darden, Mayor.*

Ala., Opelika—Water Works—City, W. S. Harris, Clk., receives bids Jan. 18 for \$225,000 5½% bonds; Henry K. Dickinson, Mayor.

Ark., Fort Smith—City, Earl Henderson, Clk., will call election Feb. 10 on \$500,000 5% bonds; J. H. Parker, Mayor.

Ark., Harrisburg—Road—Ozark Trails Commrs., C. T. Carpenter, Atty., Marked Tree, plans \$135,000 bond issue.

Fla., Bartow—Road—Polk County Commrs. receive bids Jan. 11 for \$300,000 5½% Road and Bridge Dist. No. 15 bonds.*

Fla., Bradenton—Waterfront Improvement—City voted \$265,000 bonds for municipal pier, 100-ft. boulevard, yacht basin; Roy K. Van Camp, Commr. of Public Works.*

Fla., Eau Gallie—Municipal Improvement—City voted \$250,000 bonds for harbor improvement, white way, golf course, clubhouse, aviation field, grading and paving, water works and sewer installation, docks.

Fla., Green Cove Springs—Road—Clay County Bond Trustees for Dist. No. 4 rejected bids for \$515,000 bonds.*

Fla., Kissimmee—Municipal Improvement—City Comm. will call election first week in Feb. on \$589,000 6% \$1000 denom. bonds; \$267,000 sewer improvement, \$128,000 water extension, etc., \$30,000 municipal electric lines extension, \$128,000 storm drains, \$10,000 improve city parks, \$30,000 bridge, \$3000 yacht basin. Lately noted election Jan. 2.

Fla., Lake City—Road—Columbia County voted \$500,000 bonds; J. L. Markham, Clk. Circuit Court.

Fla., Lake Worth—School—City contemplates \$350,000 bond issue. Address W. A. Boutwell, member of School Board.

Fla., Miami—Municipal Improvement—City Commrs. will call election Feb. 10 on \$11,250,000 bonds, including \$3,200,000, street; \$5,150,000, harbor improvements; \$2,150,000, bridges.

Fla., Orlando—School—Orange County Board of Public Instruction, Jas. A. Knox, Chmn., and Orlando School Dist., C. E. Howard, Chmn., Board of Trustees, voted \$1,000,000 bonds.*

Fla., St. Petersburg—Municipal Improvement—City, Stanley Martin, Director of Finance, will call election Feb. 9 for \$1,577,000 bonds; \$235,000, dredging; \$824,000, concrete pier; \$432,000, transit sheds; \$86,000, dredging inner harbor.

Fla., St. Petersburg—Municipal Improvement—City, S. S. Martin, Director of Finance, receives bids Jan. 25 for \$3,319,000 4½% or 5% \$1000 denom. bonds.

Fla., Tampa—School—Hillsborough County School Board receives bids Feb. 2 for \$20,000 Turkey Creek Dist. bonds.

Ga., Eatonton—Road—Putnam County Commrs. will call election Jan. 12 on bonds.

Ga., Rome—Municipal Improvement—City Comm. contemplates \$300,000 bond issue for paving, sewers, water works, schools, parks, playgrounds, etc.; Robert & Co., Municipal Engrs., Atlanta.

Ga., Swainsboro—School—Swainsboro School Dist. votes Jan. 25 on \$40,000 bonds. Address Supt. Connor.

Ky., Lexington—School—Board of Education, R. D. Norwood, Pres., receives bids Jan. 12 for \$400,000 4½% bonds.

La., Benton—Road—Rossier Parish voted \$1,630,000 bonds. Address Parish Police Jury.

La., Lafayette—Courthouse—Lafayette Parish voted \$300,000 bonds. Address Parish Police Jury.*

Miss., Laurel—Water Works—City votes Jan. 12 on \$50,000 bonds. Address City Clk. Lately noted election Dec. 15.

Miss., Laurel—School—Jones County Board of Supvs. plans receiving bids for \$10,000 Hebron School Dist. bonds and \$20,000 Soso School Dist. bonds.*

Mo., Sweet Springs—School—City voted \$85,000 bonds. Address City Clerk.

Mo., Webb City—Paving—City plans calling bond election in Feb. Address City Clk.

N. C., Mount Pleasant—Street—Town Commrs., A. W. Morse, Sec., receives bids Jan. 12 for \$20,000 6% \$1000 denom. bonds.

N. C., Swanquarter—Road—Hyde County voted \$300,000 bonds. Address County Commrs.

N. C., Wendell—Town Commrs., M. C. Todd, Clk., receives bids Jan. 13 for \$70,000 6% bonds.

Okla., Altus—Water Extension—City, Adella Minor, Clk., will call election Jan. 26 on \$690,000 bonds; receives bids Jan. 2 for \$650,000 5% bonds.*

Okla., Oklahoma City—Sewer—City receives bids Jan. 26 for \$950,000 or \$450,000 4½% bonds; Warren E. Moore, Commr. of Public Works.*

Okla., Wewoka—Municipal Improvement—City defeated \$20,000 bond issue; contemplates bond election. Address City Clk.*

S. C., Charleston—School—Trustees School Dist. No. 4, Charleston County, J. N. Nattan, 15 Broad St., receives bids Jan. 14 for \$140,000 5% \$1000 denom. bonds.

S. C., Greenville—Paving—H. P. Dill, Greenville County Supvr., receives bids Jan. 11 for \$200,000 5% \$1000 denom. bonds.

S. C., Spartanburg—Highway—Spartanburg County Board receives bids Jan. 14 for \$135,000 4½% bonds; J. L. M. Williams, Clk.

Tenn., Athens—Road—McMinn County Court, Will A. Latham, County Chmn., plans \$60,000 bond issue.

Tenn., Chattanooga—Right of Way—City Comm., Mayor Hardy, will call election Feb. 16 on \$325,000 bonds.

Tex., Alice—Municipal Improvement, Refund—City votes Jan. 21 on \$50,000 sewer, \$50,000 street and \$62,500 refund bonds. Address The Mayor.

Tex., Amarillo—Water Works—City, Lee Bivins, Mayor, receives bids Feb. 2 for \$1,750,000 4½, 4% and 5% bonds.*

Tex., Canyon—Paving, Water Works—City, C. M. Harrison, Mayor, will call election Jan. 11 on \$30,000 bonds.*

Tex., Conlen—School—Dallas County, Conlen Common School Dist. No. 3, Floyd McNeill, County Judge, voted \$15,000 5% bonds.*

Tex., Dallas—School—School Board, J. S. Bradfield, Pres., receives bids Jan. 11 for \$250,000 5% bonds.*

Tex., Dallas—Levee—Dallas County Levee Improvement Dist. No. 1 voted \$50,000 bonds; T. C. Forrest, Jr., Engr., Waxahachie; J. H. Prince, Member of Board.*

Tex., Denton—City Hall—City votes in April on \$75,000 bonds. Address City Clk.

Tex., Edinburg—Road—Hidalgo County, A. W. Cameron, County Judge, voted \$3,500,000 bonds.*

Tex., Edinburg—Irrigation—Hidalgo County Water Improvement Dist. No. 3, McAllen, I. G. Cook, Pres., voted \$75,000 bonds.*

Tex., El Campo—City votes Jan. 12 on \$12,000 bonds. Address The Mayor.

Tex., Elgin—School—Board of Education will call bond election. Address Pres. of Board.

Tex., Goose Creek—Paving—City voted \$16,500 bonds. Address The Mayor.

Tex., Karnes City—Road—Karnes County, Runge Road Dist., voted \$225,000 bonds. D. O. Klingeman, County Judge.*

Tex., Kerrville—Courthouse—Kerr County voted \$110,000 bonds. Address County Commissioners.*

Tex., Memphis—Paving—City voted \$50,000 bonds. Address The Mayor.*

Tex., Samfordyce—School—Tobasco Independent School Dist. voted \$360,000 bonds; H. L. Reyna, Sec. School Board, Samfordyce.*

Tex., Sherman—Street—City, J. A. Henderson, Clk., rejected bids for \$100,000 4½% bonds; receives bids Jan. 11 for bonds.

Tex., San Antonio—School—San Antonio Public School Board, Frank Haines, Pres., Russell Bldg., plans calling election on \$250,000 or \$300,000 bonds.

Tex., Victoria—Road—Victoria County defeated \$1,700,000 bond issue. Address County Commrs.*

Tex., Vickery—School—Board of Education plans calling bond election.

Tex., Wellington—Sewer—City, C. B. Myers, City Sec., will call bond election.

Tex., Wharton—Paving—City, John Blain, Sec., will call election Jan. 19 on \$85,000 bonds; B. D. King, City Engr.

Bond Issues Sold

Fla., Bartow—Road—Polk County Commrs. sold \$175,000 time warrants to First National Bank of Lakeland at premium of \$102.

Fla., Bradenton—Paving—City sold \$57,000 bonds to Wright-Varlow & Co., State Bank Bldg., Orlando, below par.

Fla., Bradenton—School—Manatee County Commrs. sold \$260,000 bonds to John Nuveen & Co., 38 S. Dearborn St., Chicago, Ill., at premium of \$777.*

Fla., Lakeland—Street—City, J. L. Davis, Clk., sold \$158,000 5% bonds to A. C. Allyn & Co., 65 W. Monroe St.; Morris Mather & Co., 111 W. Monroe St., both Chicago, and G. B. Sawyer Co., Atlantic Natl. Bank Bldg., Jacksonville, at 100.63 and accrued interest.*

Fla., West Palm Beach—Road and Bridge—Palm Beach County Commrs., Fred E. Fenn, Clk., sold \$200,000 5½% bonds to W. A. Dutch, West Palm Beach, for A. C. Allyn, 65 W. Monroe St., Chicago.*

Ga., Fitzgerald—Municipal Improvements—Water, Light & Bond Comm. sold \$90,000 5% bonds to Bell, Speas & Co., Grant Bldg., Atlanta, at premium of \$3200.*

Miss., Ocean Springs—Water Works—City sold \$75,000 5½% bonds to Hibernia Securities Co., New Orleans, La., at \$782 and expenses.

Mo., Crane—Water Works—City, Don C. Wright, Mayor, sold \$52,000 bonds to Commerce Trust Co., Commerce Bldg., Kansas City, Mo.*

N. C., Wilmington—Public Improvement—City, Thos. D. Meares, Treas., sold \$410,000 4¾% bonds to Seasongood & Mayer, 204 Ingalls Bldg., Cincinnati, Ohio, at \$44,674 and accrued interest.*

S. C., Charleston—Indebtedness—City sold \$200,000 certificates to Bankers Trust & Investment Co. of Charleston at \$199,540.

Tenn., Madisonville—Highway—Monroe County Court, C. A. Kennedy, County Judge, sold \$20,000 5% bonds to Caldwell & Co., Nashville, at \$20,030 and accrued interest.*

Tex., San Antonio—Public Improvement—City, Fred Fries, Clk., sold \$1,000,000 4½% bonds to Austin, Grant & Co., 22 William St., New York, at par, accrued interest and \$6250.*

Tex., San Antonio—Municipal Improvement—Bexar County, Augustus McCloskey, County Judge, sold \$2,000,000 bonds to J. E. Jarratt Co., Frost Natl. Bank Bldg., San Antonio, at premium of \$20,717 and accrued interest.*

Tex., San Antonio—Public Improvement—City, Fred Fries, Clk., sold \$1,000,000 4½% bonds to Austin, Grant & Co., 22 William St., George H. Burr, Howe, Snow & Bertles, both 120 Broadway, all New York, at premium of \$6250.*

Va., Richmond—Municipal Improvement—City, Barton H. Grundy, Chmn., Committee on Finance, sold \$4,300,000 4½% \$1000 denom. bonds to Bank of Commerce & Trusts, Richmond, at premium of \$95,025.*

Building and Loan Associations

Fla., Charlotte Harbor—City Building Corp., capital \$2,500,000, organized; W. D. Payne, 158 E. Flagler St., Miami.

Ky., Covington—South Covington Building & Loan Assn., capital \$200,000, chartered; Clay H. Blackburn, Orville Noel.

New Financial Corporations

Ala., Selma—Selma Financing Co., capital \$100,000, incorporated; Wm. N. Vernon, R. L. Rawls.*

Ala., Uriah—Bank of Uriah, capital \$25,000, organized; J. B. Barnett, Pres.; B. H. Stallworth, V.-P. and Cashier.

D. C., Washington—District National Bank, Col. Robert N. Harper, Pres., 1406 G St. N. W., plans increasing capital, \$550,000 to \$1,000,000.

Fla., Arch Creek—First National Bank of Arch Creek, capital \$25,000, organized; Wm. J. Lansley, Correspondent.

Fla., Sebring—Robert S. Strauss & Co., Albert W. Cohn, Pres., 108 S. La Salle St., Chicago, Ill., reported plans establishing branch office in Sebring.

Ga., Albany—New Georgia National Bank of Albany, capital \$300,000, chartered; G. E. Reynolds, Pres.; W. M. Baldwin, Cashier.

(Continued on page 140.)

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